DOCUMENT RESUME

ED 341 768 CE 059 912

TITLE	Occupational Component. 26-Level Courses. Teacher Resource Manual. Integrated Occupational Program. Interim-1991: Curriculum.
INSTITUTION	Alberta Dept. of Education, Edmonton. Curriculum Branch.
REPORT NO	ISBN-1-55006-224-7
PUB DATE	91
NOTE	391p.; For interim-1990 documents, see ED 323 337-338.
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01/PC16 Plus Postage.
DESCRIPTORS	Agribusiness; Agricultural Education; Building Trades; Career Development; Classroom Techniques; Construction (Process); Cooperative Programs; Course Content; Daily Living Skills; *Educational Resources; *Education Work Relationship; *Employment Potential; Foreign Countries; Institutional Cooperation; Job Search Methods; *Job Skills; Natural Resources; Occupational Safety and Health; Office Occupations Education; School Business Relationship; Secondary Education; Service Occupations; Skill Development; *Teaching Methods; Tourism; Transportation; *Vocational Education
IDENTIFIERS	*Alberta

ABSTRACT

This planning and instructional manual is designed to assist teachers in implementing the 20 10-credit-hour courses that make up the 26-level occupational component of the Integrated Occupational Program (IOP) in Alberta, Canada. (The IOP was developed to assist students who experience difficulties in secondary education and to help students make the school-work transition smoothly.) The manual contains information on course organization, cooperative planning, required and elective components, community partnerships, instructional strategies, and student and teacher learning resources. Ten sections provide teaching strategies and resources for the following concepts, skills, and attitudes: career, job search, human relations, and safety skills; organizational skills; communication skills; reading skills; writing skills; mathematical skills; visual skills; entrepreneurship; building community partnerships; and work skills. A section of teacher support materials list the following for 20 occupational areas: course sequence, entrance requirement, instructional locations and facilities, equipment/tools/supplies, and other learning resources. Occupational areas covered are as follows: agricultural mechanics, agricultural production, horticultural services, business services, office services, building services, construction services, crafts and arts, technical arts, natural resource services, child and health care services, esthetology, fashion and fabric services, hair care, commercial food preparation, food services, maintenance and hospitality services, automotive services, service station services, and warehouse services. (KC)

ED341768

INTEGRATED OCCUPATIONAL PROGRAM

Teacher Resource Manual

OCCUPATIONAL COMPONENT

26-LEVEL COURSES

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it
☐ Minor changes have been made to improve reproduction quality
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Stublodko
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

INTERIM – 1991

CE059912

CURRICULUM

Alberta
EDUCATION

BEST COPY AVAILABLE

Teacher Resource Manual

Occupational Component

26-Level Courses

INTERIM – 1991

NOTE: This publication is a service document. The advice and direction offered is suggestive except where it duplicates or paraphrases the contents of the Program of Studies.

ALBERTA EDUCATION CATALOGUING IN PUBLICATION DATA

Alberta. Curriculum Branch.
Occupational Component 26 : teacher resource manual.

ISBN 1-55006-224-7

1. Life skills -- Alberta. I. Title. II. Integrated Occupational Program.

HQ2039.A3.A333T 1991 375.008

Copyright © 1991, the Crown in Rights of Alberta, as represented by the Minister of Education. Alberta Education, 11160 Jasper Avenue, Edmonton, Alberta, T5K 0L2. All rights reserved.

The materials contained in this *Teacher Resource Manual* have been derived from numerous sources and are designed to provide specific support to selected areas of the curriculum. Every effort has been made both to provide proper acknowledgement of the original source and to comply with copyright regulations. If cases are identified where this has not been done, it would be appreciated if Alberta Education could be notified to enable appropriate corrective action to be taken.

ACKNOWLEDGEMENTS

Alberta Education acknowledges with appreciation the contributions of the following individuals and school jurisdictions to the development and validation of this publication:

ASSOCIATE DIRECTOR: A. A. (Scotty) Day

INTEGRATED OCCUPATIONAL PROGRAM MANAGER: Michael Alpern

PROGRAM MANAGER, OCCUPATIONAL COMPONENT: Michael Alpern

INTEGRATED OCCUPATIONAL PROGRAM PROJECT STAFF

Gary Bertrand
Jeanne Cooper
Lorraine Crawford
Marilyn Dyck
Darlene Garnier
Selwyn Jacob
Jan Marvin
Paul McNair
Linda Snow

INTEGRATED OCCUPATIONAL PROGRAM REVIEW COMMITTEE

Stuart Adams – County of Strathcona No. 20
Pat Boon-Anderson – Lac La Biche School Division No. 51
Christopher Harrison – Alberta Vocational College, Edmonton
Ed (Edwin) Holt – Conference of Alberta School Superintendents
Wayne Nixon – Alberta Career Development and Employment
Hugh Sanders – Alberta Education
William Smolak – Alberta Teachers' Association
Carol Steen – Lethbridge School District No. 51
Doug Tarney – Wetaskiwin School District No. 264

In addition, Alberta Education acknowledges with appreciation the contributions of educators and representatives of business, industry and labour in the development of this publication.

EDITING: Elizabeth McCardle

DESKTOP PUBLISHING: Lin Gray
Esther Yong

SECRETARIES: Rita Flint
Marcie Whitecotton-Carroll

TABLE OF CONTENTS

Page

INTRODUCTION ... 1
  Goals of the Integrated Occupational Program ... 1
  Time Allocation ... 1

USING THE MANUAL ... 3
  Organization of the Occupational Courses ... 3
  Cooperative Planning ... 3
  Use of the Teacher Resource Manual ... 3
  Required and Elective Components ... 6
  Developing Interpersonal Skills ... 8
  Developing Decision-Making and Problem-Solving Skills ... 8
  Instructional Location ... 8
  Generic Skills ... 8

LEARNING RESOURCES ... 17
  Student Resources ... 17
  Teacher Resources ... 17
  ACCESS NETWORK ... 18
  Regional Resource Libraries ... 18

CONCEPTS, SKILLS AND ATTITUDES ... 19

1. **Introductory Skills** ... 21
  A. Career Orientation ... 23
  B. Job Search Skills ... 27
  C. Human Relations ... 35
  D. Sanitation and Environmental Awareness ... 41
  E. Safety ... 45
  Resources 1 to 17 ... 48-79

2. **Organizational Skills** ... 81
  A. Work Ethics ... 83
  B. Planning and Organization ... 88
  C. Time Management ... 91
  D. Task Management ... 93
  E. Work Standards ... 97
  Resources 18 to 30 ... 100-125

3. **Communication Skills** ... 127
  A. Verbal Communication ... 129
  B. Non-Verbal Communication ... 131
  C. Effective Communication ... 132
  D. Telephone Communication ... 134
  Resources 31 to 37 ... 137-145

4. **Reading Skills** 147
  1. Related Occupational Terms 148
  2. Related Occupational Literature 148
  3. Community Resource Centres 148
  4. Following Written Instructions 149
  Resources 38 to 39 151-152

5. **Writing Skills** 153
  1. Uses of Writing 154
  2. Sentences and Paragraphs 154
  3. Application Letter 155
  4. Information Letter 155
  5. Thank You Letter 155
  6. Job Application Form 155
  Resources 40 to 50 157-172

6. **Mathematical Skills** 173
  1. Metric Units of Measurement 174
  2. Imperial/U.S. Units of Measurement 174
  3. Numeric Calculations 175
  4. Ratio, Proportion and Percent 175
  5. Counting Money 176
  6. Making Change 176
  Resources 51 to 56 179-197

7. **Visual Skills** 199
  1. Signs and Symbols 200
  2. Charts and Graphs 201
  3. Visual Representations 201
  Resources 56 to 62 203-238

8. **Entrepreneurship** 239
  1. Entrepreneurial Opportunities 242
  2. Characteristics of Small Businesses 243
  3. Advantages and Disadvantages of Being Self-Employed 244
  4. Costs of Operating a Business 245
  5. Business Profits 245
  6. Personal Abilities and Interests vs Business Opportunities 246
  7. Abilities Required to Establish a Business 246
  8. Establishing a Small Business (E) 246
  Resources 64 to 71 249-259

9. **Community Partnerships** 261
  Resources 72 to 74 266-268

10. **Work Skills** 269
  Resources 75 to 76 271-272

SUGGESTED TEACHING STRATEGIES 273

7

TEACHER SUPPORT MATERIAL 301
Agricultural Mechanics 26 307
Agricultural Production 26 311
Horticultural Services 26 317
Business Services 26 321
Office Services 26 327
Building Services 26 331
Construction Services 26 333
Crafts and Arts 26 335
Technical Arts 26 343
Natural Resource Services 26 345
Child and Health Care Services 26 349
Esthetology 26 351
Fashion and Fabric Services 26 353
Hair Care 26 355
Commercial Food Preparation 26 357
Food Services 26 359
Maintenance and Hospitality Services 26 361
Automotive Services 26 365
Service Station Services 26 367
Resource 1 369
Resource 2 375
Resource 3 377
Warehouse Services 26 389

COPYRIGHT ACKNOWLEDGEMENTS 391

RESOURCES

1. Interview Guide: Entry-Level Job Requirements 48
2. Survey Chart: Wages and Working Conditions 50
3. Personal Interests and Abilities Inventory 51
4. Record of Employer Contacts 58
5. Sample Application Form 59
6. Sample Employment History Form 60
7. Pre-Employment Inquiries 61
8. Networking with Those Around You 62
9. Survey of Traits 63
10. Attitude Analysis 65
11. Personal Growth Chart 67
12. Province of Alberta, Information on Occupational Health and Safety Regulations 68
13. Public Hygiene Practices 71
14. Safety Procedures and Regulations 72
15. The Accident Sequence 76
16. Kinds of Fire Extinguishers 78
17. First Aid Procedures 79
18. Rights and Obligations of Employees and Employers 100
19. Ethical Characteristics of Behaviour 104
20. Evaluation Chart: Ethical Characteristics of Behaviour 105
21. Positive and Negative Ethical Characteristics of Behaviour 106
22. Reasons for Working 107
23. Alberta Human Rights Commission 108
24. Project/Task Plan 118
25. Positive and Negative Feedback: A Record of Observations 119
26. Time Grid 120
27. Time Card 121
28. Interview Guide: The Importance of Time in the Workplace 122
29. Types of Service 123
30. Work Standards Observation Chart 124
31. Types of Communication 137
32. Signs, Symbols and Other Non-Verbal Communications Used in the Workplace 139
33. Answering the School Telephone 140
34. Putting a Caller on Hold 141
35. The Telephone: Situational Responses 142
36. Telephone Message Forms 144
37. Evaluation of Phonogenic Abilities 145
38. New Terms and Words 151
39. List of Related Literature 152
40. Sample Letter of Application 157
41. Sample Letter of Inquiry 158
42. Evaluation Sheet: Letters 159
43. Parts of a Résumé 160
44. Hints on Writing a Résumé 162
45. Sample Résumé 163
46. Evaluating a Résumé 165
47. Sample Thank You Letter 166
48. Guidelines for Completing a Job Application Form 167
49. Sample Detailed Job Application Form 169
50. Evaluation of a Job Application Form 172
51. Metric Practice Guide for Teachers 179

52. Measuring Tools and Units of Measurement Chart 193
53. Materials Unit of Sale Chart 194
54. Sample Work Order 195
55. Change Bank 196
56. Cash Handling Procedures Guide 197
57. Occupational Health and Safety: WHMIS 203
58. Safety Marks 217
59. Signs and Symbols Record Chart 233
60. Locally Developed Signs and Symbols 234
61. Input, Process, Output Model 235
62. Types of Charts and Graphs 236
63. Problem-Solving/Decision-Making Model 238
64. Entrepreneurship: Ten Ideas for Teachers 249
65. Basic Business Operating Procedures 250
66. Entrepreneurship: A Problem-Solving/Decision-Making Model 251
67. Successful Entrepreneurs: Selected Case Studies 252
68. Methods of Operating a Small Business: Advantages and Disadvantages 255
69. Reasons for Small Business Failures 256
70. Characteristics of a Successful Entrepreneur 258
71. Certificate of Entrepreneurship 259
72. Community Partnership Evaluation Form (Teacher) 266
73. Community Partnership Evaluation Form (Student) 267
74. Community Partnership Evaluation Form (Community Partner) 268
75. Self-Evaluation Chart: Work Habits 271
76. Self-Evaluation Chart: Interpersonal Competencies 272

INTRODUCTION

The Integrated Occupational Program (IOP) has been developed to assist students who experience difficulty in the regular junior and senior high school program (Grades 8-12) and, subsequently, to provide students with a smooth transition to productive lives in the workplace. One key to achieving this transition successfully is the acquisition of a set of generic and occupational-related work skills.

The Integrated Occupational Program is designed specifically to provide students with the entry-level competencies, concepts, skills and attitudes, that will enable them to become good citizens and capable and reliable workers. The entry-level job skills students attain in the Integrated Occupational Program should be viewed as a starting point rather than the culmination of their education and training. As students gain on-the-job experience, they will be able to advance up a career ladder in their chosen career area.

GOALS OF THE INTEGRATED OCCUPATIONAL PROGRAM

The goals of the program are:

- to develop the essential concepts, skills and attitudes for responsible participation in the home, the community and the workplace
- to provide learning opportunities that will enable students to experience success and achievement in order to enhance their self-esteem and independence
- to promote lifelong learning.

This *Teacher Resource Manual* (TRM) is designed to serve as a practical planning and instructional tool. It has been developed to assist teachers implement each of the twenty courses that comprise the 26-level occupational component of IOP.

The manual contains specific information regarding:

- course organization
- cooperative planning
- required/elective components
- community partnerships
- instructional strategies
- student and teacher learning resources.

TIME ALLOCATION

Each of the twenty 16-level occupational courses is a 10-credit course. Time is to be allocated to reflect the needs of individual students. Required concepts, skills and attitudes are designated 80% of the instructional time. The remaining 20% represents the elective component to be used for remediation, reinforcement, or to enrich and extend the learning experiences by providing opportunities to introduce new activities or expand suggested activities in keeping with students' interests and abilities.

USING THE MANUAL

ORGANIZATION OF THE OCCUPATIONAL COURSES

The 26-level occupational component of the Integrated Occupational Program consists of eight occupational clusters composed of twenty occupational courses. (See IOP Occupational Component Overview, p. 3.)

Each course contains learning activities that provide the vehicle through which students may develop the concepts, skills and attitudes outlined as generic learning objectives in the *Program of Studies/Curriculum Guide*. Additional occupation-related learning objectives are stated in the scope and sequence chart provided for each of the twenty occupational courses (Occupational Component, 26-Level Courses, *Program of Studies/Curriculum Guide*).

COOPERATIVE PLANNING

In schools where more than one teacher is responsible for providing instruction in the occupational component, cooperation among teachers for course delivery will ensure that students acquire the ability to transfer the concepts, skills and attitudes learned in one occupational course to other occupational courses.

USE OF THE TEACHER RESOURCE MANUAL

This *Teacher Resource Manual* is comprised of four sections (upper tabs):

Introduction: Provides an overview of the occupational component of the Integrated Occupational Program and a guide to planning for instruction and evaluation.

Concepts, Skills and Attitudes: The ten strands of generic concepts, skills and attitudes are related and suggested learning activities, and community partnerships are provided for the generic content of each occupational course. This material is organized by strand and each strand is identified by a side tab.

Suggested Teaching Strategies: A variety of strategies and sample activities useful in gathering, interpreting, recording, evaluating and communicating ideas are provided in this section.

Teacher Support Material: Additional information related to each of the twenty occupational courses is provided. This information includes suggested facilities, equipment, tools and supplies, and other learning resources.

IOP OCCUPATIONAL COMPONENT OVERVIEW

	Grade 10	Grade 11	Grade 12
Developmental Concept	Exploration	Orientation	Preparation
Primary Experiential Objective	To explore, reason, and experiment to discover skills related to clusters of occupations	To explore, experiment and practise skills related to one or more occupational areas	To practise and develop entry-level skills in one or more occupational areas
Suggested Instructional Orientation (a) School (b) Community Partnerships*	80% 20%	70% 30%	60% 40%
Credits per course	(3-5 credits) 75-125 hours	(10 credits) 250 hours	(10 credits) 250 hours
Minimum Requirement	Four 3-credit courses Two 5-credit courses	Two course sequences	One course sequence
Evaluation	Attitude, Achievement, Competency	Attitude, Achievement, Increased Competency	Attitude, Achievement, Entry Level Competency
AGRIBUSINESS 1 Agricultural Mechanics	1 Exploration of terms, tools and techniques of basic carpentry, metal work, welding and rope work	1 Orientation to arc welding, blueprint reading, small engine maintenance, painting	1 Preparation for employment and skill development in basic concrete work, electricity, forge work and soldering
2 Agricultural Production	2 Exploration of terms, tools and techniques related to land and soil products	2 Orientation to further land usage and animal production	2 Preparation for entry level jobs. Further development of land/soil products, and increased emphasis on animal production
3 Horticultural Services	3 Exploration of terms, tools and techniques of lawn and garden care	3 Orientation to skill development in horticulture and basic floriculture	3 Preparation for employment in greenhouse care, gardening and floriculture
BUSINESS AND OFFICE OPERATIONS 1 Business Services	1 Exploration of terms, tools and techniques related to jobs in sales, service and courier work	1 Orientation to retailing, cashier duties, keyboarding and telephone techniques	1 Preparation for employment, development of entry-level job skills in business services and sales
2 Office Services	2 Exploration of terms, tools and techniques related to office work and consumer awareness	2 Orientation to common office operations including keyboarding, filing, duplicating, mail handling and telephone techniques	2 Preparation for entry-level employment and further development of consumer awareness
CONSTRUCTION AND FABRICATION 1 Building Services	1 Exploration of terms, tools and techniques related to sub trade work including tool use and care; woodwork and fasteners	1 Orientation to framing, roofing, scaffold use and flooring	1 Preparation for helper roles or apprenticeship articulation. Additional skill options include painting, concrete work, bricklaying and glasswork
2 Construction Services	2 Exploration of terms, tools and techniques related to general piping, blueprint reading and tool use and care	2 Orientation to option areas including heating, gasfitting, electrical, welding and insulation services	2 Preparation for helper roles or apprenticeship articulation in one of the trade areas

* The percentage figures given for the community partnership component are recommended minimal guidelines. Schools that do not have extensive on-site facilities will undoubtedly use community work sites to a much higher degree.

BEST COPY AVAILABLE

	Grade 10	Grade 11	Grade 12
Developmental Concept	Exploration	Orientation	Preparation
CREATIVE ARTS			
1 Crafts and Arts	1 Exploration of terms, tools, materials and techniques of craft and art work	1 Orientation to skill development in specific crafts and arts	1 Preparation for entry-level employment and/or entrepreneurial activity in creative arts/cottage crafts industry
2 Technical Arts	2 Exploration of terms, tools, materials and techniques of graphic arts, media arts, photography and related arts	2 Orientation to skill development in one or more technical or related arts areas	2 Preparation for entry-level employment and/or entrepreneurial activity in one of the technical or related arts
NATURAL RESOURCES			
1 Natural Resource Services	1 Exploration of terms, tools and techniques used by workers in three natural resource industries (a) Oil and Gas (b) Forestry (c) Mining	1 Orientation to specific knowledge and skills related to one or more of three natural resource industries	1 Preparation for employment in one or more of the natural resource industries: (a) Oil and Gas (b) Forestry (c) Mining
PERSONAL AND PUBLIC SERVICES			
1 Child and Health Care Services	1 Exploration of services provided to children, the aged and the infirm	1 Orientation to principles of child care, baby-sitting, child safety, care of adults, home duties and basic nutrition	1 Preparation for employment as a day-care worker, residential aide, or nursing assistant
2 Esthetology	2 Exploration of terms, tools and grooming services used on face, feet and head	2 Orientation to facial shapes and care, eyebrow arching, false eyelash application, manicure and pedicure	2 Preparation for employment increased skill development and sales training
3 Fashion and Fabric Services	3 Exploration of garment care and cleaning, and the fashion merchandising fields.	3 Orientation to fashion and fabrics. Basic skill development in repair and cleaning of clothes	3 Preparation for employment in fashion sales or laundry/cleaning operations
4 Hair Care	4 Exploration of terms, tools and treatments related to natural hair and wig care	4 Orientation to basic hair setting and styling, cutting, hair analysis and hair goods	4 Preparation for entry-level employment as beautician's assistant, wig dresser, or apprenticeship articulation.
TOURISM AND HOSPITALITY			
1 Commercial Food Preparation	1 Exploration of terms, tools and techniques of commercial food production	1 Orientation to basic food preparation, breakfast cookery and correct operations behaviour	1 Preparation for entry-level employment. Preparation of meats, vegetables, desserts and garnishes
2 Food Services	2 Exploration of terms, tools and techniques of serving food and beverages	2 Orientation to skill development, inside work, guest relations, sales and service	2 Preparation for entry-level employment as waiter, waitress, bus person, food service establishments worker
3 Maintenance and Hospitality Services	3. Exploration of terms, tools and techniques of building maintenance and hotel/motel support services	3 Orientation to carpet and upholstery care, floor care and special area maintenance	3 Preparation for entry-level employment as maintenance worker, security guard, houseman/chambermaid, bellhop or desk clerk
TRANSPORTATION			
1 Automotive Services	1. Exploration of terms, tools and techniques of automotive care and maintenance	1 Orientation to engines and engine systems, tool and equipment care, replacement and mechanical services	1 Preparation for entry-level employment as automotive helper or apprenticeship articulation
2 Service Station Services	2. Exploration of terms, tools and techniques used in service station operations	2 Orientation to sales and service hoisting, lifting, wheels and tires, basic safety inspection	2 Preparation for entry-level employment as service station attendant and/or automotives helper
3 Warehouse Services	3. Exploration of terms, tools and techniques for warehousing, stock keeping and inventory management	3 Orientation to lifting, carrying, packing, boxing, wrapping, record keeping and receiving	3 Preparation for entry-level employment as warehouse worker, stock keeper, assistant shipper or receiver

BEST COPY AVAILABLE

Teachers are encouraged to examine each course and its corresponding student workbook and teacher support material well in advance of instruction to ensure that all necessary materials are obtained. The activities and suggestions provided within each course are numerous. **Advance planning should include a synthesis of effective strategies from the teacher's repertoire of personal experience, with suggestions from the manual considered most appropriate to individual student needs. In addition, advance planning will enable teachers to integrate the teaching and learning of the generic concepts, skills and attitudes in the context of each work skill. The Planning Matrix (p. 7) may be used for this purpose. For example, as teachers prepare for instruction, the relationship of each generic skill/work skill may be identified and noted on the planning matrix.**

REQUIRED AND ELECTIVE COMPONENTS

The complement of occupational courses taken by students in Grade 12 should enable them to achieve both the generic learning objectives outlined in the *Programs of Studies/Curriculum Guide* and the more job/career oriented learning objectives stated in the work skills scope and sequence chart provided for each occupational course. Teachers are required to provide opportunities for enrichment and remediation through the elective component of each course. The recommended time distribution for each component of the courses is:

COURSE COMPONENT	PERCENTAGE TIME ALLOCATION		
	Grade 10	Grade 11	Grade 12
Generic Learning Objectives	50	40	30
Work Skills Objectives	30	40	50
Elective Component	20	20	20

The elective component of each course may take the form of:

- enrichment activities
  - additional teacher developed activities and job sheets for students
  - additional community partnerships including mentorships, job shadowing, customer services and work site placements
  - student initiated learning activities.

- remediation activities
  - alternative teacher developed activities and job sheets for students
  - reinforcement and review of specific concepts, skills and attitudes
  - additional community partnerships including mentorships, job shadowing, customer services, and work site placements.

PLANNING MATRIX: INTEGRATING GENERIC SKILLS* WITH WORK SKILLS

COURSE:	*CONCEPTS, SKILLS AND ATTITUDES																
	INTRODUCTORY SKILLS					ORGANIZATIONAL SKILLS					COMMUNICATION SKILLS	READING SKILLS	WRITING SKILLS	MATH SKILLS	VISUAL SKILLS	ENTREPRENEURSHIP	COMMUNITY PARTNERSHIP
WORK SKILLS	C.A.	J.S.	H.R.	S.E.	S.	E.	P.O.	TIM.	TAM.	W.S.							
e.g., Demonstrates safe and correct use of tools and equipment	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
e.g., Identifies local suppliers	✓	✓	✓			✓	✓	✓	✓		✓	✓			✓		✓

C.A. - Career Awareness; J.S. - Job Search; H.R. - Human Relations; S.E. - Sanitation and the Environment; S. - Safety; E. - Ethics; P.O. - Planning and Organization; TIM - Time Management; TAM - Task Management; W.S. - Work Standards

DEVELOPING INTERPERSONAL SKILLS

The occupational courses offer many opportunities for enhancing students' interpersonal skills. Student activities performed in group settings may afford opportunities to address social interaction. A strategy for systematically analyzing a social problem is provided in the "Suggested Teaching Strategies" section of this manual ("SPOT": Social Problem-Solving Strategy). This strategy helps students to identify:

- reasons for the difficulty/conflict
- strategies that may help to avoid the difficulty/conflict another time.

Teacher modelling and student use of this strategy may improve the classroom climate, and enable students to gain confidence in their ability to interact effectively and communicate with one another.

DEVELOPING DECISION-MAKING AND PROBLEM-SOLVING SKILLS

Active participation of students is encouraged through the use of decision-making models as well as problem-solving strategies. A sample decision-making and problem-solving model is outlined in the *Program of Studies/Curriculum Guide* and additional problem-solving models are suggested in this document.

Additional strategies, designed to enhance students' thinking ability, are identified throughout the *Program of Studies/Curriculum Guide,* and are included in this manual under "Suggested Teaching Strategies".

INSTRUCTIONAL LOCATION

Each occupational course is designed to be taught in partnership between the school and one or more related businesses or industries in a community. In-school demonstrations and presentations should be complemented with a variety of field experiences including field trips, job shadowing, work study or other suitable and approved arrangements. Whenever and wherever possible, students should be provided with opportunities to work and learn alongside representatives from the occupation cluster/course being taught.

In all courses, the generic component should be taught in school by a certified teacher. Where school facilities are lacking, the work skills may be taught through a community partnership arrangement with a teacher supervisor.

GENERIC SKILLS

Generic skills are also known as functional or transferable skills. They consist of those skills that are developed through experience:

- in the home
- in school
- in the workplace.

Generic skills are common to most work and life situations. They are, therefore, transferable between occupational clusters and between occupations.

The Matrix of Occupational Clusters, Courses and Generic Skills on the following page shows the relationship between the various generic skills and each occupational cluster and course, Grades 10-12.

The Generic Skills Evaluation Chart shown on pages 10-16 may be used to validate students' growth and development in that area.

IOP OCCUPATIONAL COMPONENT, GRADES 10-12
A MATRIX OF OCCUPATIONAL CLUSTERS, COURSES, AND GENERIC SKILLS*

OCCUPATIONAL CLUSTER	OCCUPATIONAL COURSE	*CONCEPTS, SKILLS AND ATTITUDES																
		INTRODUCTORY SKILLS					ORGANIZATIONAL SKILLS					COMMUNICATION SKILLS	READING SKILLS	WRITING SKILLS	MATH SKILLS	ENTREPRENEURSHIP	COMMUNITY PARTNERSHIP	WORK SKILLS
		C.A.	J.S.	H.R.	S.E.	S.	E.	P.O.	TIM.	TAM.	W.S.							
AGRIBUSINESS	Agricultural Mechanics	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Agricultural Production	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Horticultural Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BUSINESS AND OFFICE OPERATIONS	Business Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Office Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CONSTRUCTION AND FABRICATION	Building Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Office Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CREATIVE ARTS	Crafts and Arts	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Technical Arts	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NATURAL RESOURCES	Natural Resource Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PERSONAL AND PUBLIC SERVICES	Child & Health Care Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Esthetology	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Fashion and Fabric Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Hair Care	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TOURISM AND HOSPITALITY	Commercial Food Prep	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Food Service	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Maintenance & Hosp. Serv.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TRANSPORTATION	Automotive Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Service Station Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Warehouse Services	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

C.A. – Career Awareness; J.S. – Job Search; H.R. – Human Relations; S.E. – Sanitation and the Environment; S. – Safety; E. – Ethics; P.O. – Planning and Organization; TIM – Time Management; TAM – Task Management; W.S. – Work Standards

GENERIC SKILLS EVALUATION CHART

Student's Name: ____________________

Course Name: ______________________

Instructor's Validation

INTRODUCTORY SKILLS	Awareness	Use	Mastery	Other
1. Identifies the scope of local business/industry.				
2. Selects occupation from career clusters.				
3. Describes entry-level requirements.				
4. Identifies wages and working conditions.				
5. Explores personal job interests.				
6. Defines business/industry terms.				
7. Locates job opportunities.				
8. Lists the sequence of tasks in the job search strategy.				
9. Matches personal interests to job requirements.				
10. Introduces self to local business/industry operations.				
11. Obtains job application forms.				
12. Recognizes the purpose of networking.				
13. Compares wages and working conditions of related jobs.				
14. Defines "human relations", "personality" and "traits".				

		Instructor's Validation			
	INTRODUCTORY SKILLS	Awareness	Use	Mastery	Other
15.	Identifies traits in related occupations.				
16.	Recognizes appropriate workplace behaviour.				
17.	Demonstrates the ability to relate to others.				
18.	Demonstrates the ability to accept praise/criticism.				
19.	Identifies areas for personal strength/personal growth.				
20.	Identifies causes of conflict/cooperation.				
21.	Recognizes appropriate strategies to enhance personal growth.				
22.	Identifies industry related sanitation practices.				
23.	Demonstrates personal hygiene.				
24.	Describes health and welfare regulations.				
25.	Demonstrates public hygiene.				
26.	Demonstrates safe practices.				
27.	Demonstrates safe use of tools and equipment.				
28.	Demonstrates safe use of supplies.				
29.	Identifies unsafe work practices.				
30.	Participates in first aid training.				

Instructor's Validation

ORGANIZATIONAL SKILLS	Awareness	Use	Mastery	Other
31. Recognizes ethics of related occupations.				
32. Demonstrates willingness to practise ethical behaviour.				
33. Recognizes the meaning of work.				
34. Demonstrates awareness of the needs of others.				
35. Demonstrates tolerance and understanding of other cultures.				
36. Demonstrates pride in self.				
37. Accepts advice.				
38. Develops a basic task plan.				
39. Implements a basic task plan.				
40. Evaluates the outcome of task plan implementation.				
41. Recognizes the meaning of "feedback".				
42. Identifies time-task relationship.				
43. Demonstrates effective time management.				
44. Demonstrates perseverance.				
45. Prepares tools and supplies required for the task.				
46. Practises positive work habits.				
47. Defines the practice of service in the service industries.				

	Instructor's Validation			
ORGANIZATIONAL SKILLS	Awareness	Use	Mastery	Other
48. Describes work standards used in related occupations.				
49. Demonstrates acceptable work standards.				
50. Describes the relationship between work standards, service and profit.				
COMMUNICATION SKILLS				
51. Recognizes appropriate/inappropriate forms of verbal communication.				
52. Recognizes appropriate/inappropriate forms of non-verbal behaviour.				
53. Communicates effectively with peers, teachers and others.				
54. Initiates telephone calls.				
55. Records telephone information correctly.				
READING SKILLS				
56. Uses related occupation terms.				
57. Identifies occupation related literature.				
58. Obtains access to resources in community resource centres.				
59. Interprets and follows written instructions.				

	Instructor's Validation			
WRITING SKILLS	Awareness	Use	Mastery	Other
60. Describes uses of writing skills in related occupations.				
61. Writes in complete sentences and paragraphs.				
62. Writes a letter of inquiry.				
63. Writes a letter of thanks.				
64. Completes a job application form.				
MATHEMATICAL SKILLS				
65. Uses metric units of measurement.				
66. Uses imperial and U.S. units of measurement where necessary.				
67. Performs basic numeric calculations using whole numbers, fractions and decimals.				
68. Uses appropriate strategies to calculate ratio, proportion and percent.				
69. Counts money up to $1 000.				
70. Makes change to $100.				
VISUAL SKILLS				
71. Interprets occupation-related signs and symbols.				
72. Interprets charts and graphs and describes their purpose.				
73. Creates a visual representation of a project or process. (E)				

E = Elective Component

	Instructor's Validation			
ENTREPRENEURSHIP	Awareness	Use	Mastery	Other
74. Recognizes entrepreneurial opportunities.				
75. Recognizes common characteristics of small business.				
76. Identifies advantages and disadvantages of being in business.				
77. Recognizes the cost of operating a business.				
78. Appreciates that not all money earned is profit.				
79. Identifies business opportunities related to personal abilities and interests.				
80. Identifies abilities required to establish a business.				
81. Develops a business plan and operates a small business. (E)				
COMMUNITY PARTNERSHIPS				
82. Orients self to the workplace.				
83. Demonstrates appropriate work habits.				
84. Uses safe and sanitary practices.				
85. Demonstrates pride in self.				
86. Demonstrates pride in work performance.				
87. Shows respect for others.				
88. Respects the property of others.				

E = Elective Component

WORK SKILLS	Instructor's Validation Awareness	Use	Mastery	Other
89. Lists and describes related jobs.				
90. Lists and describes equipment, tools and supplies.				
91. Demonstrates safe use of equipment, tools and supplies.				
92. Works to accepted standards.				
93. Manages supplies effectively.				
94. Maintains work area in a safe and sanitary condition.				

LEARNING RESOURCES

STUDENT RESOURCES

BASIC LEARNING RESOURCE

The resource listed below meets the majority of the goals and objectives identified in this curriculum:

Campbell, Richard and Mary J. Thompson, et al. *Working: Today and Tomorrow* (Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

Working: Today and Tomorrow provides for the focussed development of the generic concepts, skills and attitudes identified in the *Program of Studies/Curriculum Guide*. It is intended that appropriate sections of the text be used throughout the sequence of each occupational course, Grades 10-12.

SUPPORT LEARNING RESOURCES

A student workbook is available for each occupational course. The workbook related to each 26-level occupational course provides students with information, exercises, and job sheets that follow the scope and sequence of skill development identified in the Work Skills Profile contained in each student workbook.

The specific activities and projects contained in the workbooks are not meant to be prescriptive or exhaustive; rather, they may provide points on which to focus the development of specific learning related to an occupational cluster.

Teachers are encouraged to complement and supplement the material contained in student workbooks to meet individual student's needs.

TEACHER RESOURCES

The teacher resources listed below are designed to support the instructional use of the basic learning resources:

The *Teacher Resource Manual* (1991) for IOP 26-level occupational courses developed by Alberta Education contains strategies and suggested student activities intended to structure and support:

- development of the concepts, skills and attitudes as outlined in the *Program of Studies/ Curriculum Guide*
- development of life and work skills
- delivery of instruction in each occupational course.

Other learning resources listed in the teacher support material in this document have been identified as potentially useful for integrating instruction of the generic concepts with the work skills. Except where designated, these titles have not been evaluated by Alberta Education and their listing is not to be construed as an explicit or implicit departmental approval for use. These titles are provided as a service only to assist local jurisdictions to identify resources that contain potentially useful ideas for teachers. The responsibility of evaluating these resources before making a selection rests with the local jurisdiction according to local policy.

ACCESS NETWORK

ACCESS offers a variety of resources and services to teachers. For a nominal dubbing and tape fee, teachers may have ACCESS audio and video library tapes copied. ACCESS also offers a service called "Night Owl Dubbing". This allows educators to tape late night educational programs directly from their own televisions.

ACCESS publishes both an *Audio-Visual Catalogue* and a comprehensive schedule of programming, available on request.

For additional information, contact ACCESS NETWORK, Media Resource Centre, 295 Midpark Way S.E., Calgary, Alberta, T2X 2A8 (from outside of Calgary, telephone toll free, 1-800-352-8293; in Calgary, telephone 256-1100).

REGIONAL RESOURCE LIBRARIES

Films and videos are available for loan through the five centres listed below. In some instances, computer software is also loaned. Catalogues of holdings are available upon request.

Zone I

Peace River Regional
c/o Peace River School Division No. 10
P.O. Box 988
Peace River, Alberta
T0H 2X0
Telephone: 624-3187

Zones II and III

Central Alberta Media Service
c/o Sherwood Park Catholic Separate School District
2017 Brentwood Boulevard
Sherwood Park, Alberta
T8A 0X2
Telephone: 464-5540

Zone IV

Alberta Central Regional Education Services
County of Lacombe No. 14
Bag Service 108
Lacombe, Alberta
T0C 1S0
Telephone: 782-6601

Zone V

South Central Alberta Film Federation
County of Wheatland No. 16
Box 90
Strathmore, Alberta
T0J 3H0
Telephone: 934-5028

Zone VI

Southern Alberta Regional Film Centre
c/o McNally School
P.O. Box 845
Lethbridge, Alberta
T1J 3Z8
Telephone: 320-7807

CONCEPTS, SKILLS AND ATTITUDES

The *Occupational Component 26-Level Courses, Program of Studies/Curriculum Guide* consists of ten generic components.

Generic components (concepts, skills and attitudes) include:

1. Introductory Skills
2. Organizational Skills
3. Communication Skills
4. Reading Skills
5. Writing Skills
6. Mathematical Skills
7. Visual Skills
8. Entrepreneurship
9. Community Partnerships
10. Work Skills

The generic components of the curriculum are common to each of the occupational courses. They represent the concepts, skills and attitudes students acquire which are transferable to and applicable in the home, the school, the community and the workplace.

The generic concepts, skills and attitudes presented in this manual correspond to those contained in the *Program of Studies/Curriculum Guide*. They should be taught and reinforced within the context of each occupational course. The relationships between the eight occupational clusters, twenty occupational courses and the generic concepts, skills and attitudes are outlined in the matrix shown on page 9.

Component 10, Work Skills, consists of both generic and elective learning objectives. The elective learning objectives are specific to each occupational course and are outlined in the *Occupational Component 26-Level Courses, Program of Studies/Curriculum Guide* Scope and Sequence Charts, pp. 129-288.

1. INTRODUCTORY SKILLS

The introductory skills include:

A. Career Awareness

B. Job Search Skills

C. Human Relations

D. Sanitation and the Environment

E. Safety.

The introductory skills are common to all occupational courses. At the Grade 11 level their purpose is to provide students with the opportunity to become oriented to jobs and career opportunities in two or more occupational areas.

Teachers are encouraged to be flexible in their sequencing of the introductory skills. Rather than presenting the introductory concepts and skills from a purely theoretical perspective, their presentation as an integrated part of one or more of the work skills will help to give them meaning and more relevance. (See "Planning Matrix: Integrating Generic Skills with Work Skills, p.7.)

RESOURCES

STUDENT RESOURCE

- *Working: Today and Tomorrow* (Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

Correlation of Learning Objectives with Student Resource

Concepts, Skills and Attitudes	*Working: Today and Tomorrow*
1. Introductory Skills	
A. Career Awareness	Chapter 1, Appendix
B. Job Search Skills	Chapter 7
C. Human Relations	Chapter 10 "The Importance of Attitude"
D. Sanitation and the Environment	Chapter 11 " Preventing Accidents and Illnesses"
E. Safety	Chapter 11

TEACHER RESOURCES

- Resource 1, "Interview Guide: Entry-Level Job Requirements"
- Resource 2, "Survey Chart: Wages and Working Conditions"
- Resource 3, "Personal Interests and Ability Inventory"

- Resource 4, "Record of Employer Contacts"
- Resource 5, "Sample Application Form"
- Resource 6, "Sample Employment History Form"
- Resource 7, "Pre-Employment Enquiries"
- Resource 8, "Networking with Those Around You"
- Resource 9, "Survey of Traits"
- Resource 10, "Attitude Analysis"
- Resource 11, "Personal Growth Chart"
- Resource 12, "Province of Alberta, Information on Occupational Health and Safety Regulations"
- Resource 13, "Public Hygiene Practices"
- Resource 14, "Safety Procedures and Regulations"
- Resource 15, "The Accident Sequence"
- Resource 16, " Kinds of Fire Extinguishers"
- Resource 17, "First Aid Procedures"
- Alberta Career Development and Employment publications
  - *Occupational Profiles*
  - *The Easy-to-Read Career Planning Guide*
  - *The School-Work Connection*
- Business and trade journals
- *Canadian Classification and Dictionary of Occupations (CCDO),* Employment and Immigration Canada, Occupational and Career Analysis and Development Branch
- Careers Canada Services, Employment and Immigration Canada
- Career Selector Series, Ontario Ministry of Labour, Women's Bureau
- Careers, Provincial Series, Employment and Immigration Canada
- Student workbooks
- School and public health nurses
- Telephone and business directories
- Workers' Compensation Board officials and publications
- WHMIS: Working for You (video) available from:
  AASP/CGSE Provincial Body, P.O. Box 262, Main Post Office, Edmonton, Alberta, T5J 2J1
- Community partners.

A. CAREER ORIENTATION

The purpose of this introductory skill is to enable students to expand the context, identified in previous grades, for the knowledge, skills and attitudes that will be developed throughout each 26-level occupational course.

Expanding the occupational context for students increases the meaningfulness of subsequent learnings.

The skills developed at the Grade 11 level include:

1. Identifies scope of local businesses and industries
2. Selects occupations from career cluster
3. Describes entry-level requirements
4. Identifies wages and working conditions
5. Explores personal job interests.

1. LOCAL BUSINESSES AND INDUSTRIES

The types and numbers of businesses and industries in a community may change over time. Various factors may affect the types and numbers of industries as well as newly established businesses and those that stop operating.

Suggested Activities/Community Partnerships

1. a. Using local telephone and business directories, newspapers, other media and observational skills, identify local businesses and industries that relate to the occupational course.

   b. List three local businesses and three local industries that relate to the course.

   c. Interview the owner/operator/manager or long service worker in the business/industry operation to determine how long each business and industry has been operating in the community.

   d. A variety of career opportunities have been discussed in this course. Which businesses/industries in your community offer similar career opportunities?

2. a. Brainstorm to review the characteristics of local businesses and industries. Record these characteristics. (See Suggested Teaching Strategies, "Brainstorming".)

   b. Which of the following factors may encourage the development of a new local business or industry? Why?
      - geographic location
      - trends: markets, seasons, long-term prospects
      - labour intensity
      - entrepreneurial opportunities
      - how money is earned: wage, salary, commission
      - other factors

3. a. Invite representatives from local businesses and industries to discuss job and career trends.

b. Visit course-related local businesses and industries and, through interviews, discussions, job shadowing, or community partnerships, identify and record short- and long-term course-related job and career prospects.

2. OCCUPATIONS AND CAREER CLUSTERS

The occupational component of IOP consists of twenty courses arranged into eight occupational clusters.

Students acquiring knowledge of the relationship between occupational clusters, courses and job and career opportunities are better able to plan for future employment and continuing education/training.

Student Activities/Community Partnerships

1. a. Brainstorm to review and record the eight occupational clusters that represent the major fields of employment for IOP students in Alberta.

   b. To which occupational cluster does this course relate?

   c. Using a variety of school and community resources (e.g., local newspapers, bulletin boards, employment and immigration pamphlets), identify the variety of jobs and careers that relate to:
      - the occupational cluster
      - the occupational course.

2. Discuss:

   a. What job and/or career opportunities in other occupational clusters are related to this course?

   b. Which skills (i.e., concepts, skills and attitudes) learned/acquired in this course may be used in other courses?

   c. What are the advantages/disadvantages of developing transferable concepts, skills and attitudes?

3. a. Which occupations are of most interest to you? Why?

   b. Draw a flow chart or semantic web to show:
      - jobs that relate to the course
      - career ladders that relate to the course.

   (See Suggested Teaching Strategies, "Flow Charting: A Process Analysis Strategy".)

3. ENTRY-LEVEL REQUIREMENTS

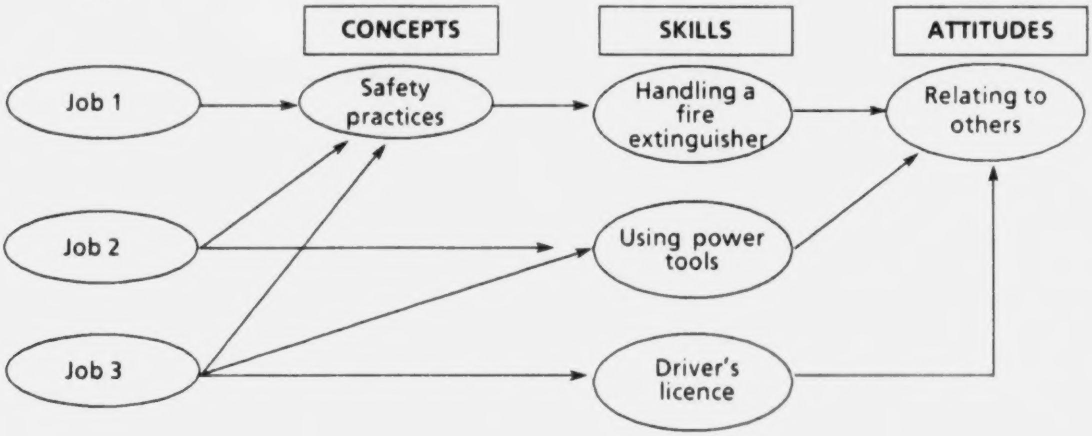
Each occupational cluster and course in the Integrated Occupational Program covers a broad spectrum of job and career opportunities.

It is important that students be able to identify the entry-level requirements for different jobs.

Suggested Activities/Community Partnerships

1. a. Brainstorm to review and record the entry-level requirements for three jobs.

   b. Draw a chart or web to show the relationship among the entry-level requirements for the three jobs.
   e.g.,


CONCEPTS
SKILLS
ATTITUDES
Job 1
Safety practices
Handling a fire extinguisher
Relating to others
Job 2
Using power tools
Job 3
Driver's licence

2. Select two different jobs that relate to the course, and interview or job shadow a worker who performs each job in the community. Use Resource 1, "Interview Guide: Entry-Level Job Requirements", to record each worker's responses and your observations.

3. a. Read the classified advertisements in the local newspaper(s) and related business/industry journals.

   b. Copy (in writing or with a photocopier) advertisements that identify the entry-level requirements for two jobs.

   c. Share the copies with other students in the class and use the following chart to show the entry-level requirements of each job identified.

ENTRY-LEVEL REQUIREMENTS IN JOBS			
JOB	ENTRY-LEVEL REQUIREMENTS		
	CONCEPTS	SKILLS	ATTITUDES
1.			
2.			

4. WAGES AND WORKING CONDITIONS

People select an occupation for a variety of reasons. Two of these reasons relate to:

- Wages – the amount of money that a worker receives hourly, weekly, monthly or by the piece for work performed
- Working conditions – the environment in which work is performed and the benefits received by workers in the occupation.

Wages and working conditions may affect an employee's level of job satisfaction.

Suggested Activities/Community Partnerships

1. a. Share the information obtained with respect to wages and working conditions (questions 11 and 12 of Resource 1, "Interview Guide: Entry-Level Job Requirements") with the class.

   b. Based on your interview notes from Resource 1 and your observations, complete Resource 2, "Survey Chart: Wages and Working Conditions".

2. Discuss:
   - Which of the following is more important to an entry-level employee: good wages or good working conditions? Why?

3. Invite community partners from related occupations to participate in a panel discussion on trends in wages and working conditions in a given occupational cluster/course.
   E.g.,
   - union representative
   - management representative
   - guidance or career counsellor
   - local employee
   - entrepreneur.

5. PERSONAL JOB INTERESTS

Personal job interests change over time. What appeared to be an interesting type of work and possible career path one or two years ago, may now appear to be less interesting. **The ability to reassess one's personal job interests is an important part of the job and career selection process.**

Suggested Activities/Community Partnerships

1. What are the tasks you like to do? What tasks do you do well? Use either Resource 3, "Personal Interests and Abilities Inventory", or pages 7-17 of the *Easy-to-Read Career Planning Guide* to perform a self-assessment.

2. Review the self-assessment you performed for your Grade 10 occupational courses.

   a. Have the tasks you liked to do in Grade 10 changed now that you're in Grade 11?
      - What tasks have changed?
      - Why do you think they've changed?

   b. Have the tasks you were good at in Grade 10 changed now that you're in Grade 11?
      - What tasks have changed?
      - Why do you think they've changed?

B. JOB SEARCH SKILLS

The ability of students to recognize that job search is a process and not an event is a major deficiency in graduates of high schools, colleges and universities.

One of the primary goals of the Integrated Occupational Program is to develop students' ability to attain and retain employment. The concept of job search and the development of related skills is an integral part of each occupational course.

The skills to be developed at the Grade 11 level include:

1. Defines industry/business related terms
2. Locates job opportunities
3. Lists the sequence of tasks in the job search process
4. Matches personal interests to job requirements
5. Introduces self to local business/industry operations
6. Obtains job application forms
7. Recognizes the purpose of networking
8. Compares wages and working conditions with other related jobs.

1. INDUSTRY/BUSINESS RELATED TERMS

Each job, trade, business, industry has its own language. Identification and practical use of the appropriate language of business and industry can assist students to gain:

- easier admittance to the work force
- acceptance in the workplace
- a sense of identity and belonging to a group.

The development of these language skills during the 16-26-36 sequence of each occupational course will assist students in making a smooth transition from school to the workplace.

Students should be able to define the meaning of the following terms:

- unskilled worker
- semi-skilled worker
- apprentice
- entry-level skills.

Job-specific descriptions should also be defined and discussed; e.g., What is, and what qualifications are needed to become a(n):

- apprentice?
- esthetologist?
- horticultural assistant?
- leasehand?
- derrickhand?

Familiarity with the language of industry and business will help to instil confidence and poise in students.

Suggested Activities/Community Partnerships

1. a. Review the related terminology and definitions introduced in the related Grade 10 occupational course.

   b. Draw a career ladder to show the relationship between
      - unskilled workers
      - semi-skilled workers
      - apprentices
      - entry-level workers.

2. Invite community partners to participate in class discussions
   a. Alberta Career Development and Employment
   Topics: The relationship between the course and Alberta's system of apprenticeship.
   How students who attain a Certificate of Achievement can articulate with the apprenticeship system.

   b. Employer/manager of a local industry or business
   Topics: At what levels does the industry/business take on employees?
   What does/should the Certificate of Achievement mean to an employer/manager/manageress?

3. a. Participate in job shadowing and/or other field experiences and listen carefully for job-related terms that are new to you. List them and later define them by:
      - asking people in the workplace what each term means
      - using a dictionary
      - reading trade/business/industry journals.

   b. Keep a reference book to record the new terms identified and defined each month.

2. JOB OPPORTUNITIES

The ability of students to locate existing and potential opportunities for employment is an important part of their goal-setting process. Students need to be aware of local, regional, provincial and national trends within each occupational cluster.

Suggested Activities/Community Partnerships

1. a. Brainstorm and record how job opportunities in the community may be identified.

   b. Using each of the above methods of identifying job opportunities, identify job opportunities in the community. List each job under the method used to identify it.

2. What strategies may be used to introduce yourself to a prospective employer even though a job is not being advertised (e.g., letters of introduction, networking, advertising)?

3. JOB SEARCH PROCESS

The 16-level occupational courses introduced the fact that the search for a job is a process and not an event. In each of the 26-level occupational courses, students should be encouraged to develop competence and confidence in recognizing and practising their job search skills including:
- identifying personal interests
- identifying personal strengths
- matching interests, strengths and abilities

- deciding what is wanted from work
- identifying job opportunities
- obtaining and completing job applications
- identifying the "hidden job" market
- writing a résumé
- writing a covering letter
- participating in a job interview
- accepting a job
- keeping a job.

Suggested Activities/Community Partnerships

1. a. Invite community partners to lead a class discussion on the job search process and why it is important to follow each step of the process. Community partners may include:
    - school guidance counsellor
    - personnel manager from a local industry/business
    - Alberta Career Development and Employment career counsellor.

   b. Have students use a listening guide to stay attuned to each speaker's message. (See Suggested Teaching Strategies, "A Guide to Effective Listening".)

2. Encourage students to share their experiences about successful and unsuccessful job searches.

   a. Why were the successful job searches successful?

   b. Why were the unsuccessful job searches unsuccessful?

4. PERSONAL INTERESTS AND JOB REQUIREMENTS

Having previously identified entry-level job requirements (Learning Objective, A.3) and compiled a Personal interests and Abilities Inventory (Learning Objective, A.5), it may now be appropriate for students to match the entry-level requirements for jobs to their personal interests and abilities.

Knowledge of job-specific requirements and of one's interests and abilities will help students to:
- **see the relationship between their interests, abilities and jobs in the community**
- **identify personal strengths and limitations in relation to specific jobs**
- **establish goal-directed learning patterns.**

Suggested Activities/Community Partnerships

1. a. Make a chart to show the relationship between personal interests, abilities and specific jobs.

   b. Present your chart to the rest of the class and ask classmates to suggest other jobs that relate to your interests and abilities.

2. Read *The Easy-to-Read Career Planning Guide* (pp. 17-28) and answer the following questions:

   a. What do you want from work?

   b. What is your dream job? Is it a realistic dream? Why, or why not?

c. What would you do if you were Sarah? (Sarah's New Dream Job, pp. 21-23.)

d. What else might Martin do to learn about trucking and to become a truck driver? (Talking About Trucking, pp. 25-27.)

3. Select a job that is of most interest to you and describe (verbally or in writing) why you believe that you can be successful at it.

   a. What interests and abilities do you have that are suited to the job?

   b. What must you be willing to do to:
      - get the job?
      - keep the job?
      - be promoted?
      - start your own business doing similar work?

   c. Where can you obtain further education/training related to this job?

5. INTRODUCTION TO LOCAL BUSINESSES/INDUSTRIES

Not all available jobs are advertised. Local businesses and industries are often willing to hire a person who shows the initiative to make the first contact and who has the requirements necessary for employment (i.e., knowledge, skills, attitude).

Students in each occupational course have the opportunity to identify prospective employers and introduce or "sell" themselves to these employers through community partnership activities.

Suggested Activities/Community Partnerships

1. a. Use local resources such as newspapers, telephone and business directories, advertising flyers, to make a list of potential employers in related industries/businesses in the community.

   b. Select six work sites that interest you. Visit each one and introduce yourself to the employer/manager/manageress.
   (Note: These introductions may be performed when gathering information from a community partner; e.g., when using Resource 1, "Interview Guide, Entry-Level Job Requirements".)

   c. Use Resource 4, "Record of Employer Contacts", to keep a record of businesses/industries visited, persons contacted and impressions of the operation for future reference.

2. Discuss:
   - Why is it important to make personal contacts with local businesses/industries?
   - What qualities (e.g.,appearance, knowledge, skills, attitudes) do you think an employer/manager is looking for in an entry-level employee?

3. Imagine that you own a local business. Use the following chart to list the qualities you would look for in an entry-level employee. Give reasons for selecting each quality.

Type of Business ______________________________

Entry-Level Job ______________________________

DESIRABLE QUALITIES	**REASONS**
e.g., Good grooming	e.g., ● Comes in contact with the public ● Reflects a positive image
1.	
2.	
3.	
4.	
5.	

4. Preparing to introduce yourself to a prospective employer is as important as actually making the introduction. List the things you would do to prepare yourself before visiting a community partner, and the reasons why you would do them.

e.g., Get a haircut	e.g., ● Good personal grooming creates a positive impression
1.	
2.	
3.	
4.	

6. JOB APPLICATION FORMS

Most large companies require prospective employees to fill out an application form. These forms provide employers with a record of each prospective employee.

A job application form is a long-lasting record of who you are, what you can do, and why you want a job with a particular company.

A well-presented application form should be:
- accurate and complete
- neatly handwritten or typed
- free from errors, erasures and stains
- neatly folded and placed in an envelope before being given/sent to the employer.

Suggested Activities/Community Partnerships

1. a. Read *The Easy-to-Read Career Planning Guide* (pp. 29-30).

   b. Use Resource 5, "Sample Application Form", and Resource 6 "Sample Employment History Form", to gain practice in filling out application forms.

2. a. Contact (i.e., by telephone, letter or in person) government employment offices and other employers in the community to obtain copies of different application forms.

   b. Are there differences between the forms you obtained? What are these differences?

3. Some application forms ask applicants to indicate their hobbies and interests. Discuss:
   What is the employer attempting to learn about a prospective employee by asking these questions?

4. Some job application forms ask applicants to describe why they want to work for the company.

   a. Write a paragraph describing why you would like to work for a company known to you in the community. (See Suggested Teaching Strategies, "Descriptive Writing".)

   b. Share your paragraph with classmates and discuss the appropriateness of each other's paragraph.

5. The Alberta Human Rights Commission provides examples of the types of questions, both verbal or written, that can be posed by employers to job applicants. Read Resource 7, "Pre-Employment Inquiries", and answer the following questions:

   a. Why are some questions categorized as "permitted inquiries" while other inquiries are categorized as "not recommended"?

   b. Discuss with classmates:
      What should you do if a "not recommended" inquiry is made on a job application form? During an interview?

7. NETWORKING

Networking is the process of establishing multiple channels for communication (Resource 8, "Networking with Those Around You", outlines potential people who may be involved in a network).

Networking is a method that may be used to:
- **tell everyone you know that you are looking for a job**
- **have others look for a job on your behalf.**

Suggested Activities/Community Partnerships

1. a. Read *The Easy-to-Read Career Planning Guide* (pp. 31-34). (See Suggested Teaching Strategies, "RAP".)

   b. Write down the names of six people you know, their jobs and the reason why you think they would be effective members of your network.

NAME OF NETWORKER	JOB	REASON FOR SELECTION

   c. Discuss:
   Why are 70 percent of available jobs never advertised?

2. Brainstorm:
   What other strategies can be used to establish a network of people who know you and know that you are looking for a job (e.g., letters of introduction/inquiry, filling out application forms, posting notices on bulletin boards)?

8. COMPARATIVE WAGES AND WORKING CONDITIONS

Suggested Activities/Community Partnerships

1. a. Scan the classified advertisements section in local newspapers for jobs in related occupations. Clip six advertisements for related job opportunities that detail wages and working conditions.

   b. Which of the six employers offers the:
      - highest wages?
      - lowest wages?
      - best working conditions?
      - worst working conditions?

   c. If you were offered a job by each of the six employers, which job would you take? Why?

   d. Discuss your selection and the reasons for your choice with classmates.

C. HUMAN RELATIONS

In this unit, the concept of human relations is expanded from the notion of interpersonal relationships to include human relations in the workplace. **The ability of students to develop and maintain good relationships with peers and others is an integral part of each senior high school IOP course.**

The skills developed in the concept of human relations at the Grade 11 level include:

1. Defines "human relations", "personality", "traits"
2. Identifies traits in related occupations
3. Recognizes appropriate workplace behaviour
4. Demonstrates the ability to relate to others
5. Demonstrates ability to accept praise/criticism
6. Identifies areas for personal strength/growth
7. Recognizes appropriate strategies to enhance personal growth
8. Identifies causes of conflict/cooperation.

1. HUMAN RELATIONS, PERSONALITY AND TRAITS

Human behaviour is often described in terms of:

- **Human relations** – A concept that relates to the way people communicate with each other.
- **Personality** – A term used to describe the qualities that make each person behave or act differently from others.
- **Traits** – The qualities of mind, character, etc., which, together, affect behaviour and determine personality.

Suggested Activities/Community Partnerships

1. Brainstorm to identify and record the variety of:

   a. ways in which people relate to one another

   b. descriptions given to different types of personality

   c. personality traits.

2. Invite community partners to participate in a panel discussion dealing with the importance of human relations in the workplace. Participants may include a(n):
   - employer
   - employee
   - labour union representative
   - personnel manager
   - volunteer agency representative.

3. Describe your own human relations skills, your personality and your traits. List them on the following chart and indicate if each is a strength or a weakness. Share and discuss your responses with classmates.

SELF-ANALYSIS CHART		
	STRENGTH	WEAKNESS
My human relations skills:		
My personality:		
My traits:		

2. TRAITS IN RELATED OCCUPATIONS

Effective workers in all occupations tend to demonstrate similar traits.

Traits include:
- artistic and creative ability
- communication skills
- craftsmanship
- human relations skills
- love of nature and the outdoors
- mechanical skills
- organizational skills
- physical fitness
- pleasing personality
- positive attitude toward work
- technical skills.

Suggested Activities/Community Partnerships

1. Use Resource 9, "Survey of Traits", to conduct a survey of employers and employees in jobs related to this course.

2. Discuss:
   - How do the generic and work skills taught in the course relate to personality traits?

   (Note: The Occupational Component 26-Level Courses Profile found in the *Program of Studies/Curriculum Guide* and the Work Skills Profiles found in the student workbook, may be used as guides in this activity.)

3. Attitudes are important personal traits. What attitudes do you have toward work? employers? others? Read Resource 10, "Attitude Analysis", and follow the instructions in order to:
   - identify the range of attitudes you possess
   - analyze each attitude
   - attempt to change less desirable attitudes into positive ones.

   (Note: Students may prefer to keep their analyses private.)

3. WORKPLACE BEHAVIOUR
4. RELATIONSHIPS
5. ACCEPTING PRAISE/CRITICISM

In many ways, people who work together often resemble a family. In these relationships one may find:
- authority figures
- competition
- helping
- teasing
- comforting.

The behaviour of people in the workplace is related to their human relations skills, personality and traits.

Desirable workplace behaviours include the ability to:
- communicate effectively
- relate well to peers and others
- follow rules, regulations and instructions
- accept constructive criticism
- correct one's own errors
- recognize the need for continuing education and training.

Suggested Activities/Community Partnerships

1. Discuss: How do relationships in the classroom and/or the workplace resemble family relationships? What are the characteristics of:
   - positive family relationships?
   - positive workplace relationships?
   - negative family relationships?
   - negative workplace relationships?

2. One of the characteristics of positive family and positive workplace relationships is that people in both groups usually help each other. Brainstorm to identify and record:
   - ways in which people may help each other in an occupation
   - how much do co-workers in an occupation depend on each other to accomplish their tasks?

3. Working in small groups, role play a workplace situation in which workers help one another.

4. Working in pairs, role play a workplace situation in which one worker is critical of another. (See Suggested Teaching Strategies, "SPOT".)

   a. If you were the worker being criticized, how would you handle the situation?

   b. If you were the one who was offering criticism:
      - how do you think those you criticized feel?
      - how do you feel when you criticize others?

   c. What effect may this type of behaviour have in the workplace?

   d. If you were an employer/manager, how would you handle this type of situation?

5. a. Working in small groups, discuss how a person might feel when, having made a mistake, they're called "stupid".

   b. What may be the short- and long-term effects if someone is frequently told "you're stupid"?

   c. What is a more positive way to react to your own or a co-worker's mistake?

6. AREAS OF PERSONAL STRENGTH/GROWTH
7. MAXIMIZING PERSONAL GROWTH

Personal growth involves learning new life-improvement behaviours that help to enhance one's life.

In the context of each occupational course, students should be provided with a variety of opportunities to:

- identify their strengths and their limitations
- maximize their strengths through planned activities.

Major areas of personal growth that can prove beneficial in the home, in the school and in the workplace include:

Attitude	The way you think, feel, act toward other people or things.
Courtesy	An expression or action of politeness or thoughtfulness toward others.
Initiative	The ability to take the first step; make the first move; be creative in thinking and doing.
Punctuality	The ability to be on time and to complete tasks according to time lines.
Responsibility	The ability to recognize your own importance and the importance of any task you may be asked to perform.
Cooperation	The ability to work with and respect the rights of others.
Honesty	The ability to behave properly when placed in a position of trust.
Sense of humour	The ability to laugh at yourself and recognize that making a mistake can be a valuable learning experience.

Suggested Activities/Community Partnerships

1. a. For each of the following areas of personality, brainstorm to generate examples of positive and negative behaviour as they relate to:
    - Attitude
    - Courtesy
    - Initiative
    - Punctuality
    - Responsibility
    - Cooperation
    - Honesty
    - Sense of humour.

   b. Invite community partners to discuss the relative importance of each of the personality traits noted in question 1.a to related occupations.

c. Based on the discussion, list the eight traits in their order of importance in each of the situations shown in the chart below.

TRAIT	ORDER OF IMPORTANCE		
	GETTING A JOB	KEEPING A JOB	BEING PROMOTED
ATTITUDE			
COURTESY			
INITIATIVE			
PUNCTUALITY			
RESPONSIBILITY			
COOPERATION			
HONESTY			
SENSE OF HUMOUR			

d. Does the order of importance differ between the three situations? Why? Why not?

2. Using Resource 11, "Personal Growth Chart", identify your strong and weak traits and suggest activities that could lead to personal growth (i.e., How would you build on your strong traits and lessen your weak traits?).

8. CONFLICT AND COOPERATION

In extreme cases, conflict may be defined as a prolonged fight or struggle. In less extreme cases, the term "conflict" may be used to describe disagreements about ideas, opinions, ways of doing things, etc.

"Cooperation" means to work together and to provide support for others' ideas, opinions, and ways of doing things.

Suggested Activities/Community Partnerships

1. In your own words, define the following terms: "conflict", "cooperation".

2. a. What types of behaviour tend to promote cooperation between co-workers?

   b. What strategies may be used to promote cooperation in the workplace?

   c. What benefits may be achieved through cooperative efforts by:
   - employees?
   - employers?

3. a. What types of behaviour may lead to conflict between co-workers?

   b. What strategies may be used to:
   - minimize potential conflict situations?
   - resolve conflicts when they occur?

D. SANITATION AND ENVIRONMENTAL AWARENESS

The concept of "sanitation and environmental awareness", as used in occupational courses, relates to the personal-public/individual-group responsibilities for maintaining clean and healthy conditions in the workplace and in the environment in general.

Health and safety in the workplace are usually linked together. However, in order to place additional emphasis on both, each is addressed as a separate concept in the generic skills profile.

The maintenance of sanitary work areas and of work environments is essential to work and life skills.

The skills to be developed at the Grade 11 level include:

1. Identifies industry-related sanitation practices
2. Demonstrates good personal hygiene
3. Describes health and safety regulations
4. Demonstrates public hygiene.

1. INDUSTRY/BUSINESS SANITARY PRACTICES
2. PERSONAL HYGIENE

Hygiene refers to keeping things clean and maintaining one's health. Sanitation refers to the practices used to maintain hygienic conditions.

Personal hygiene refers to practices performed and the standards set by individuals to maintain their health and cleanliness.

Personal hygiene standards and practices are important because they influence:

- a person's ability to perform necessary work skills
- a person's ability to work with others
- a person's employability.

Personal hygiene practices include:

- bathing daily
- using appropriate deodorant or anti-perspirant
- practising good eating habits
- exercising regularly
- having regular medical, dental and optical check-ups
- washing/laundering of clothes
- maintaining good mental health.

Suggested Activities/Community Partnerships

1. Sanitary standards and practices may differ between occupations, even occupations within one occupational cluster. For example, in the agribusiness occupational cluster, sanitary standards and practices adopted in a flower shop may be very different from those adopted on a farm.

   a. Visit local business/industry operations and observe and keep a record of the sanitary practices in each operation.

   b. Are there differences in the types and cleanliness of clothes worn by workers doing similar jobs but in different operations? Why? What effect might this difference have on the workers? On the public?

2. Make a list of the things you do to maintain your personal hygiene and health and beside each item note how frequently you do it (e.g., visit the dentist every six months).

3. Discuss:
   - What effect does a worker's personal hygiene have on human relations in the workplace?
   - What effect does a worker's personal hygiene have on customer relations in the workplace?

3. HEALTH AND SAFETY REGULATIONS
4. PUBLIC HYGIENE

Public hygiene refers to practices required by governments and performed by people in business/industry to protect the health of the general public.

Public hygiene practices are important because they influence standards including:

- the quality of the environment in the workplace and in the community
- the quality of product safety or the safety of services offered in the workplace.

Public hygiene practices and standards in the workplace include:

- providing clean washrooms and toilets
- maintaining a pollution-free environment (e.g., clean air, reasonable noise levels)
- wearing protective clothing where required
- maintaining a clean and safe work area.

In the province of Alberta, the Ministry of Occupational Health and Safety is responsible for safeguarding the health of workers and others. Department inspectors are responsible for safeguarding:

- workers' health
- workplace and work area hygiene;

and protecting workers and the environment against:

- unsafe work practices
- unsafe use of chemicals, tools and equipment.

Inspectors also have the right to visit any work site to assess the conditions of the workplace and the effects of any work on the surrounding environment.

Student Activities/Community Partnerships

1. The Alberta government is responsible for occupational health and safety in the province. To familiarize yourself with occupation-related regulations:

    a. Obtain and read a copy or summary of the occupational health and safety regulations that relate to the course. (Resource 12, "Province of Alberta, Information on Occupational Health and Safety Regulations" provides names and addresses of agencies that may be contacted for information booklets, pamphlets, etc.)

    b. Invite community partners from the local agencies to discuss occupational health and safety standards and practices with the class; e.g.,
        - local hospitals or public health units
        - provincial Occupational Health and Safety Board
        - Workers' Compensation Board.

2. a. Visit three similar workplaces and observe public hygiene practices. Use Resource 13, "Public Hygiene Practices" to keep a record of those you observe. Compare these with the records made by classmates and discuss the following questions:
    - What were the major differences in the public hygiene practices observed in the three workplaces?
    - Are public hygiene practices more carefully performed in some work sites than in the others? Where? What effect might this have on the operation?

3. All occupations require workers to observe and to practise general public hygiene. However, some occupations require workers to observe and practise a strict set of public hygiene standards and practices. Some of these occupations include:
    - Agricultural production
    - Child and health care
    - Commercial food preparation
    - Food services
    - Maintenance and hospitality services.

   a. What special public hygiene standards and practices are related to this occupational course?

   b. What are some of the reasons for these special standards and practices?

   c. What could happen if these standards and practices were not followed?

4. There is increased public awareness about "keeping the environment green".

   a. What does this expression mean?

   b. What are related businesses/industries doing to protect the environment?

   c. As a worker, what can you do to help protect the environment?

   d. List examples of equipment, tools and supplies used in business or industry that are:
      - environmentally friendly
      - potentially damaging to the environment.

E. SAFETY

The concept of safety and its related skills is an essential learning across all occupational courses and is dealt with both as a generic concept and a specific work skill within each occupational course.

Safety is not just an entry-level work skill. Work skills are either safe or they are unsafe, and the consequences of unsafe practices can be disastrous both to self and to others.

Students should receive instruction in safe equipment, tools and supply use and general safety practices both in the school lab and in the workplace. These instructions should be reinforced through theory and practice throughout the course. (See Suggested Teaching Strategies, "CARE".)

The skills and attitudes developed in the concept of safety in the workplace at the Grade 11 level include:

1. Demonstrates safe practices
2. Demonstrates safe use of equipment and tools
3. Demonstrates safe use of supplies
4. Identifies unsafe work practices
5. Participates in first aid training.

RESOURCES

- Alberta Occupational Health and Safety
  - WHMIS information packages
  - WHMIS Working for You, 1989.

- Alberta Labour publications
  - Heating Boiler Safety (Pamphlet, 1985)
  - Reporting Accidents (Form, 1985)
  - Help Yourself to Electrical Safety in Industry (Brochure, 1981)
  - Help Yourself to Electrical Safety on the Farm (Brochure, 1985)
  - Baby-Sitter! You Are Responsible (Card)
  - Emergency Fire Information (Booklet, 1985)
  - Know Your Fire Extinguishers (Cards).

- Armour, Margaret-Ann, et al. *Potentially Carcinogenic Chemicals: Information and Disposal Guide*. University of Alberta and Cross Cancer Institute. Distributed by Terochem Scientific, Box 8188, Station F, Edmonton, AB, T6H 2P1.

- Armour, Margaret-Ann, et al. *Hazardous Chemicals: Information and Disposal Guide*. University of Alberta. Distributed by Terochem Scientific, Box 8188, Station F, Edmonton, AB, T6H 2P1.

1. **SAFE PRACTICES**
2. **SAFE USE OF TOOLS AND EQUIPMENT**
3. **SAFE USE OF SUPPLIES**
4. **UNSAFE WORK PRACTICES**

Safety is as much a state of mind as it is a set of safe practices. Students should be encouraged to think of safety as an integral part of the normal skill development process, not as a set of extra tasks that they have to perform.

Safety in the school lab and in the workplace is everyone's business. An unsafe act by one person can affect the health and welfare of many others.

The student workbook available for each Grade 11 occupational course addresses safety procedures, safe use of equipment, tools and supplies, and unsafe work practices as they apply to specific jobs and tasks. In particular, the importance of the Workplace Hazardous Materials Information System (WHMIS) is stressed.

Suggested Activities/Community Partnerships

1. Resource 14, "Safety Procedures and Regulations" can be adapted for use in any lab or workplace. These procedures and regulations should be reinforced by:
   - posting them on a conspicuous notice board in the lab or workplace
   - ensuring that each student follows them.

2. Use Resource 15, "The Accident Sequence", to reinforce procedures used to prevent accidents.

3. a. Proper procedures for handling a fire extinguisher can be learned by reviewing and practising the contents of Resource 16, "Kinds of Fire Extinguishers".

   b. Plan a visit to your local fire department to observe the types of fire extinguishers available.

4. View the video WHMIS Working for You (Alberta Occupational Health and Safety, 1989) and then discuss the following questions:
   - What is the Workplace Hazardous Materials Information System?
   - Why is knowledge about WHMIS important in the home, in school, in the community and in the workplace?
   - How does the information system work?

5. Brainstorm, what are the possible results of improper handling of hazardous materials in the workplace?

See Resource 57, "Occupational Health and Safety: WHMIS" in the Visual Skills unit for additional information about the Workplace Hazardous Materials Information System.

5. FIRST AID

Students will have received introductory first aid training in their Grade 8 or 9 Practical Arts course as well as in one or more of their Grade 10 occupational courses. Teachers may, therefore, wish to address this section by:

- assessing the incoming first aid ability of each student in the Grade 11 occupational course
- planning to offer first aid training in conjunction with teachers of other Grade 11 occupational courses
- having "professional" first aid trainers (e.g., certified Red Cross or St. John Ambulance trainers) provide this segment of the occupational courses to students. Unless the teacher is a certified trainer, his or her credentials may be questioned.

Suggested Activities/Community Partnerships

1. Participate in a certified first aid training course to obtain either introductory or higher level certification.

2. a. Invite the school nurse, firefighter, paramedic or similarly qualified community partner to demonstrate what to do for various accidents, injuries and emergency situations.

   b. Develop a written record of the procedures to follow in case of various emergencies; e.g.,
      - fire
      - burn
      - heart attack
      - minor cut
      - major injury.

   c. After having received thorough instruction in and demonstrations of appropriate first aid procedures to follow in given circumstances, use Resource 17, "First Aid Procedures", to maintain a record of first aid procedures you have completed to the satisfaction of your teacher/supervisor.

INTERVIEW GUIDE:

ENTRY-LEVEL JOB REQUIREMENTS

COURSE: ____________________ Student's Name: ____________________

Name of person interviewed: ____________ Date: _____ Occupation: ____________________

1. What are the entry-level requirements in this occupation?

____

____

2. What general technical knowledge is required?

____

____

3. What general practical skills are required?

____

____

4. a. Is a driver's licence necessary? ☐ Yes ☐ No

   b. If "yes" to 4.a., is a defensive driving certificate necessary? ☐ Yes ☐ No

5. Is physical fitness (toughness, strength, stamina) a requirement? Why or why not?

____

____

6. Would fear of heights or enclosed spaces be a handicap to employment?

____

____

7. Can this job be performed by a handicapped person? (Please specify type of handicaps that may interfere with this job.)

____

____

8. Is shift work a requirement? What are the typical shifts?

____

____

9. Are there any other special entry-level requirements that I should be aware of? Please specify what they are.

____

____

10. a. Is joining a union mandatory? ☐ Yes ☐ No

b. If yes to 10.a., what are the advantages/disadvantages of becoming a member of a union?

Advantages	Disadvantages

c. Which union is involved with this job? ______

d.
- How much are the union fees? ______
- How frequently are they paid? ______

11. a. How much money could an entry-level employee in this occupation expect to earn hourly? Weekly? Monthly? Annually?

______

b. Are there opportunities to increase my income? ____ How (e.g., overtime, further education, length of service, previous experience)?

______

12. a. Describe the working conditions in this occupation? ______

______

b. What do you like most about your working conditions?

______

c. What do you like least about your working conditions?

______

SURVEY CHART: WAGES AND WORKING CONDITIONS

Student's Name: ____________________

Occupation: ______________________________

Major tasks performed: ____

____

1. WAGES

Highest, lowest and average wage offered to entry-level employee in this community

- Highest entry-level wage ____________________ (indicate if wages are
- Lowest entry-level wage ____________________ hourly, weekly, monthly
- Average entry-level wage ____________________ or annual rates)

2. WORKING CONDITIONS

List the working conditions in the occupation as being either positive or negative

Positive Working Conditions	Negative Working Conditions
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________

3. OCCUPATIONAL CHOICE

(Select (a) or (b) and complete the sentence.) This occupation:

a. interests me as a possible career choice because:

____

____

____

b. does not interest me as a possible career choice because:

____

____

____

60

PERSONAL INTERESTS AND ABILITIES INVENTORY

This inventory is meant to help you identify the things you like to do and the things you do well.

1. THINGS I LIKE TO DO:

You know what you like to do and what you don't like to do. Most people like to do things they do well. Read through this list and make a check under Yes if it is something you like doing. If it is something you don't like doing make your check under No. If it's something you like doing now and then, make your check under Sometimes.

EXAMPLE:	Yes	Sometimes	No
I like washing dishes	☐	☑	☐
I like fixing cars	☑	☐	☐
I like drawing	☐	☐	☑

	Yes	Sometimes	No
I like helping people	☐	☐	☐
I like serving people	☐	☐	☐
I like fixing things	☐	☐	☐
I like selling things	☐	☐	☐
I like working with machines	☐	☐	☐
I like teaching children	☐	☐	☐
I like adding numbers	☐	☐	☐
I like typing	☐	☐	☐
I like swimming	☐	☐	☐
I like cleaning homes	☐	☐	☐
I like applying make-up	☐	☐	☐
I like cooking foods	☐	☐	☐
I like driving	☐	☐	☐
I like exercising	☐	☐	☐
I like sewing	☐	☐	☐
I like working with tools	☐	☐	☐
I like working with animals	☐	☐	☐
I like handling money	☐	☐	☐

	Yes	Sometimes	No
I like styling hair	☐	☐	☐
I like growing plants	☐	☐	☐
I like listening to music	☐	☐	☐
I like playing a musical instrument	☐	☐	☐
I like baking	☐	☐	☐
I like arranging flowers	☐	☐	☐
I like delivering parcels and letters	☐	☐	☐
I like playing sports	☐	☐	☐
I like travelling	☐	☐	☐
I like gardening	☐	☐	☐
I like painting houses	☐	☐	☐
I like singing	☐	☐	☐
I like dancing	☐	☐	☐
I like taking photographs	☐	☐	☐
I like washing windows	☐	☐	☐
I like walking	☐	☐	☐
I like talking on the telephone	☐	☐	☐
I like teaching adults	☐	☐	☐
I like coaching sports	☐	☐	☐
I like doing crafts	☐	☐	☐
I like cleaning carpets	☐	☐	☐
I like moving furniture	☐	☐	☐
I like making people laugh	☐	☐	☐

Other things I like to do:

2. THINGS I DO WELL:

Now you have an idea of what things you like to do. Of course, there are some things that you like to do more than others. You probably can do some things better than other things. Maybe you can fix a car, but you can't decorate a birthday cake. Maybe you can talk with all kinds of people, but you can't drive a car or truck.

1 Knowing what you **like** to do is the first step in planning your career.

2 Knowing what you **can do well** is your next step.

Read this list of skills. If you can do the skill well, make your check under the words Can Do Well. If you can do it, but you're not that good at doing so, make your check under Can Do. If you can't do it at all, make your check under Can't Do.

Don't sell yourself short. There will be many things you can do well.

EXAMPLE:	**Can Do Well**	**Can Do**	**Can't Do**
I can speak two languages	☑	☐	☐
I can train dogs	☐	☐	☑
I can sew dresses	☐	☑	☐

	Can Do Well	**Can Do**	**Can't Do**
I can lift heavy objects	☐	☐	☐
I can drive a truck	☐	☐	☐
I can sell things	☐	☐	☐
I can convince people	☐	☐	☐
I can organize people	☐	☐	☐
I can plan a party	☐	☐	☐
I can cut hair	☐	☐	☐
I can build houses	☐	☐	☐
I can tidy tables	☐	☐	☐
I can cook	☐	☐	☐
I can bake	☐	☐	☐
I can build a brick wall	☐	☐	☐
I can build furniture	☐	☐	☐
I can style hair	☐	☐	☐
I can fix car engines	☐	☐	☐
I can fix small appliances	☐	☐	☐
I can fix plumbing	☐	☐	☐
I can care for small children	☐	☐	☐
I can type	☐	☐	☐
I can help people who are upset	☐	☐	☐

	Can Do Well	Can Do	Can't Do
I can file letters	☐	☐	☐
I can teach children	☐	☐	☐
I can use a computer	☐	☐	☐
I can speak to a group of people	☐	☐	☐
I can paint a picture	☐	☐	☐
I can play a sport	☐	☐	☐
I can write a story	☐	☐	☐
I can tell a story	☐	☐	☐
I can rearrange a room to look better	☐	☐	☐
I can learn new things	☐	☐	☐
I can pay bills	☐	☐	☐
I can buy groceries	☐	☐	☐
I can entertain people	☐	☐	☐
I can add numbers	☐	☐	☐
I can do tax forms	☐	☐	☐
I can make a budget	☐	☐	☐

Are there other things you can do that aren't listed here? List them here:

____
____
____
____
____
____
____
____
____
____

	Yes	No
Do you like to fix or make things?	☐	☐
Do you like working with your hands?	☐	☐
Do you like working with plants or animals?	☐	☐
Do you like to see what you have accomplished at the end of the day?	☐	☐
Do you like to work with things rather than people?	☐	☐
Do you like to operate machinery?	☐	☐

People who say "yes" to most of those questions, work in places like these:

Loading docks
Farms
Fish farms
Factories
Taxi companies
Carpentry shops
Small appliance repair shops
Airports
Sewing factories
Pet-grooming businesses
Bottle depots
Gas stations
Construction sites
Landscape companies
Oil rigs
Fishing boats
Fur farms
Post offices
Hotels
Hospitals
Restaurants
Parking lots
Drycleaning plants
Cleaning companies
Veterinarian offices
Manufacturing companies
Transport companies

These are just some of the jobs that people working at those places can do:

Car or truck mechanic
Small-appliance repair person
Construction labourer
Butcher
Assembly line worker
Kitchen helper
Plumber
Carpenter
Loader
Cutter
Taxi driver
Farm worker
Heavy equipment operator
Janitor
Baker
Gas station attendant
Locksmith
Letter carrier
Dressmaker
Sailor
Seamstress
Freight handler
Sewing machine operator
Truck driver
Maid
Ranch hand
Upholsterer
Cook
Optician
Shipping/receiving clerk
Tree surgeon
Letter sorter
Bus driver
Miner
Meter reader

	Yes	No
Do you like to type?	☐	☐
Can you use business machines such as copiers or computers?	☐	☐
Are you good at working with numbers?	☐	☐
Would you like to work in an office?	☐	☐
Do you like following a regular routine?	☐	☐

People who say "yes" to most of these questions like to work in places like:

Airline offices
Business offices
Mail rooms
Doctor's offices
Banks
Insurance companies
Government offices
Store offices
Libraries
Travel bureaus
Telephone companies

These are some of the jobs that people working at those places can do:

Typist
Bank teller
Payroll clerk
Secretary
Accountant
Medical secretary
Court reporter
Insurance adjuster
Postal clerk
Auditor
File clerk
Receptionist
Telephone operator
Word processing operator
Library assistant
Ticket agent
Rental agent
Cashier
Medical records librarian

	Yes	No
Do you like talking to people?	☐	☐
Do you like to persuade people to do what you would like them to do?	☐	☐
Do you see yourself as a leader?	☐	☐
Are you self-confident?	☐	☐
Do you think you could speak in front of a group of people?	☐	☐
Do you see yourself as a real go-getter?	☐	☐
Do you like to set goals for yourself and others and then reach them?	☐	☐
Do you like to organize people?	☐	☐

People who say "yes" to most of these questions like to work in places like:

Furniture stores
Clothing stores
Accounting companies
Real estate companies
Radio stations
Grocery stores
Department stores
Insurance companies
Construction companies
Television stations
Personnel offices

These are just some of the jobs that people working at those places could do:

Auctioneer
Real estate agent
Business manager
Product demonstrator
Gas station manager
Car rental clerk
Store manager
Office manager
Insurance salesperson
Door-to-door salesperson
Banker
Car salesperson
Telephone solicitor
Purchasing officer
Pawnbroker
Production manager
Shoe store manager
Route salesperson
Street vendor

	Yes	No
Do you like to help people?	☐	☐
Do you like to work with people rather than with things?	☐	☐
Can you teach people how to do things?	☐	☐
Can you make people feel better physically?	☐	☐
Do you like to help people discover ways they can help themselves?	☐	☐
Do you work well with other people?	☐	☐
Can you plan a party?	☐	☐
Have you worked as a volunteer with a hospital, clinic or church group?	☐	☐
Can you explain things clearly to other people?	☐	☐

People who say "yes" to most of these questions like to work in places like:

Schools
Restaurants
Personnel departments
Dental offices
Insurance companies
Barber shops
Prisons
Fitness clubs
Hospitals
Movie theatres
Churches
Funeral homes
Beauty salons
Child care centres
Homes for the handicapped
Senior citizens' homes

These are just some of the jobs people working at those places do:

Ambulance attendant
Fitness teacher
Baby-sitter
Funeral attendant
Movie usher/usherette
Schoolteacher
Claims adjuster
Dental assistant
Homemaker
Counsellor
Nursing aid
Police officer
Crosswalk attendant
Companion/homemaker
Hospital porter
Child care worker
Houseparent
Restaurant hostess
Theatre ticket taker
Nurse
Bartender
Manicurist
Security guard
Occupational therapy aide
Morgue attendant

Adapted from *The Easy-to-Read Career Planning Guide* (pp. 7-17). Copyright 1986 by Alberta Career Development and Employment. Reprinted with permission.

RECORD OF EMPLOYER CONTACTS

Name/Address of Employer	Date	Name of Person Seen	Type of Jobs Available	Personal Impression of Operation

SAMPLE APPLICATION FORM

Complete all blanks. Use CAPITAL LETTERS

General Information

Name in full ______________________ Social Insurance Number ______________
Last First Middle

Address ______________________ Phone ______________
Number and Street City Province Postal Code

Previous Address ______________________
Number and Street City Province Postal Code

How long there ______________

Position you are applying for ______________

When can you start work? ______________

Education – Most recent school first.

Names of schools attended	Dates of attendance	City

Employment Background – Most recent job first.

Dates	Name & Address of Employer	Job Title and Duties	Rate of Pay	Reason for Leaving

General

What machines or equipment can you operate? ______________

What additional experience or training have you had (other than work experience)? ______________

What hobbies and activities are you involved in? ______________

Which languages do you speak? ______________

References – Other than relatives.

Name	Occupation	Firm – name and address	Phone

To the best of my knowledge, the above information is truthful and accurate.

Signature ______________

From *The Easy-to-Read Career Planning Guide*. Copyright 1986 by Alberta Career Development and Employment. Reprinted with permission.

SAMPLE EMPLOYMENT HISTORY FORM

EMPLOYER: ____________________
(Most recent first.)

ADDRESS: ____________________

TELEPHONE: ____________________

TERM OF EMPLOYMENT: ____________________

SUPERVISOR: ____________________

POSITION AND DUTIES: ____________________
(Use a copy of the job description or detail specific activity. Use action words.)

REASON FOR LEAVING: ____________________
(State in a positive manner.)

REFERENCES:

NAME	ADDRESS	TELEPHONE	OCCUPATION	YEARS KNOWN
1.				
2.				
3.				

GENERAL INFORMATION (hobbies, activities, volunteer work)
(Use action words to describe additional skills, experiences, or extra-curricular activities related to the position.)

DECLARATION: **I HEREBY DECLARE THAT TO THE BEST OF MY KNOWLEDGE, THE INFORMATION ON THIS APPLICATION FORM IS COMPLETE AND ACCURATE IN EVERY RESPECT. I UNDERSTAND THAT A FALSE STATEMENT MAY DISQUALIFY ME FROM EMPLOYMENT OR CAUSE MY SUBSEQUENT DISCHARGE IF I AM EMPLOYED.**

DATE: ____________ **SIGNATURE:** ____________________

NOW, WHAT IS YOUR FIRST IMPRESSION WHEN YOU REVIEW YOUR APPLICATION?

From *Job Search Information Guide*, Special Education Services, Alberta Education, May 1986. Reprinted with permission.

PRE-EMPLOYMENT INQUIRIES

The inquiries given below are the types of questions frequently posed by employers to job candidates. This chart gives some examples of the inquiries that are permitted and those not recommended.

SUBJECT	PERMITTED INQUIRIES	INQUIRIES NOT RECOMMENDED
Sex, Marital Status	Availability for shift work, travel, etc.	Plans for marriage, family, child care
Race, Colour, Ancestry or Place of Origin	Are you legally permitted to work in Canada?	Place of birth, citizenship status, racial origin, next of kin
Name	Name used in previous employment and/or education, for purposes of reference checks	Maiden name, or "christian" name
Military Service	Military service in Canada	Foreign military service; this might indicate place of origin
Languages	Fluency in any language specifically required by a job	Other languages when not required in a specific job
Photographs		Photograph would reveal race, sex, etc.
Clubs or Organizations	Membership in professional clubs or organizations, hobbies or interests which do not reveal sex, race, religious beliefs, ancestry or place of origin	Specific inquiries about club and organization memberships which would indicate race, religious beliefs, ancestry or place of origin
Age	Are you of legal age to work in Alberta?	Specific age over 18, including retirement information
Height and Weight	Describe job duties requiring heavy lifting or other physical job requirements	Minimum/maximum height and weight requirement/stipulations
Physical Disability	Statement that job offer is contingent upon a satisfactory job-related medical examination	General physical disabilities, limitations, present or previous health problems Workers' Compensation claims
Non-smoking	An employer may ask if an applicant is a non-smoker or indicate that the successful applicant will be required to work in a non-smoking environment	Asthmatic or permanent respiratory conditions which may be affected by smoke

---

From *Protecting Human Rights*. Copyright 1986 by Alberta Human Rights Commission. Reprinted with permission.

NETWORKING WITH THOSE AROUND YOU

Family and relatives

Teachers, coaches, counsellors

Job, club, support group members

Classmates (previous and current)

WHO YOU KNOW HELPS!

People seen frequently (tellers, cashiers, druggists, postal carriers)

Former customers/clients/business competitors

Club members (bowling, curling, baseball, bridge, fitness, skiing)

Members of organizations, associations, special interest groups and unions

"PEOPLE GET PEOPLE JOBS" — SO MEET PEOPLE!

Professionals (dentists, chiropractors, lawyers, counsellors, doctors)

Parents of children's friends

Former employers

Friends and neighbours

Teachers, professors, instructors

TELL EVERYONE!

Church and community members/leaders

Casual acquaintances (a friend of a friend of a friend)

People in contact with many others (hairstylists, waitresses, bus/cab drivers)

Former co-workers and colleagues

Company employees (workers, secretaries, receptionists)

Strangers (store clerks/customers, bus passengers, sports spectators)

LET THE WHOLE WORLD KNOW!

Employers (personnel managers, company recruiters)

People at specific occasions (wedding, party, banquet guests)

Workshop, convention, conference attendees, speakers, leaders

Volunteer coordinators/associates

PASS THE WORD AROUND!

SURVEY OF TRAITS

Survey at least six people, three employers and three employees in jobs. Record their responses to the questions in A. and B. and then answer the questions immediately following.

COURSE: ____________________ OCCUPATION SURVEYED: ____________________

A. EMPLOYERS' QUESTIONS	**EMPLOYER**		
	A	B	C
1. What three traits do you look for when hiring an entry-level worker?			
2. Which of these three traits is most important in this occupation?			
3. Which trait(s) do you not want to see? Why not?			
B. EMPLOYEES' QUESTIONS	**EMPLOYEE**		
	A	B	C
1. What three traits do you think an employer looks for when hiring an entry-level worker?			
2. Which of these three traits is most important in this occupation?			
3. Which trait(s) do employers not want to see demonstrated by an employee? Why not?			

1. How do employer and employee responses differ to:

   a. Question 1?

   ____

   ____

   ____

b. Question 2?

____

____

____

c. Question 3?

____

____

____

2. Based on your analysis of the survey:

   a. What are the three most desirable traits for an entry-level employee in an occupation?

      -
      -
      -

   b. What are the three least desirable traits for an entry-level employee in an occupation?

      -
      -
      -

3. What effect will this survey have on your job search strategies?

____

____

____

____

____

ATTITUDE ANALYSIS

An "attitude" can be described as the way a person feels about things. These feelings – toward a person, an idea, an event or a thing – are communicated through a variety of behaviours. For example, the behaviour of smiling can express a feeling of happiness, as well as a positive attitude about the person you are with or the event that is occurring.

However, attitudes frequently occur on a continuum between positive and negative. Also, some attitudes can be said to be positive in some situations and negative in others. Pride, for example, can be a good or positive attitude, when a person is proud of schoolwork; but if this proud feeling also includes conceit, or causes the loss of friends because the person is too boastful, pride can then become more of a negative attitude.

INSTRUCTIONS:

1. Using the attitudes listed below, identify your attitudes. If you believe you are more positive, place your check mark (✓) on the continuum line closer toward the positive end; if negative, place the check mark to the right. Check under "Neutral" if your attitude is both positive and negative.

ATTITUDE ANALYSIS GRAPH

POSITIVE (+) ATTITUDES	NEUTRAL	NEGATIVE (–) ATTITUDES
ENTHUSIASM		INDIFFERENCE
CURIOSITY		BOREDOM
CONCERN		APATHY
HUMILITY		EGOTISM
FAITH		DISTRUST
COOPERATION		BELLIGERENCE
DETERMINATION		INDECISION
SYMPATHY		COLDNESS
TOLERANCE		PREJUDICE
KINDNESS		SELFISHNESS
GRATITUDE		INGRATITUDE
TRUST		DISTRUST
OPTIMISM		PESSIMISM
SOCIABILITY		SHYNESS
SELF-CONFIDENCE		INSECURITY
TRUTHFULNESS		DISHONESTY
CONTENTMENT		DISSATISFACTION

2. After placing a check mark along each continuum, connect the check marks with a line.

3. Describe your overall attitude. Is it positive? Negative? Neutral?

4. How do others describe your attitude?

5. a. If you wanted to project a more positive attitude to others, what attitude changes might you need to make?

   b. How might you attempt to make these changes?

PERSONAL GROWTH CHART

Eight personal traits are listed below. Beside each trait or behaviour:

1. Indicate with a check mark (✓) whether this is a very strong, moderately strong or weak part of your personality.
2. Suggest how you might improve this part of your personality.

TRAIT	SCALE			SUGGESTIONS FOR PERSONAL GROWTH
	VERY STRONG	MODERATELY STRONG	WEAK	
ATTITUDE				
COURTESY				
INITIATIVE				
PUNCTUALITY				
RESPONSIBILITY				
COOPERATION				
HONESTY				
SENSE OF HUMOUR				

PROVINCE OF ALBERTA

SOURCES OF INFORMATION ON OCCUPATIONAL HEALTH AND SAFETY REGULATIONS

OCCUPATIONAL HEALTH AND SAFETY LEGISLATION

Safety Regulations:
For more information concerning safety regulations, please contact the nearest regional office of the Inspection Branch, Occupational Health and Safety Division.

9321 - 48 Street
EDMONTON, Alberta
T6B 2R4

Phone: 427-8848

2nd Floor
1021 - 10the Avenue S.W.
CALGARY, Alberta
T2R 0B7

Phone: 297-2222

3rd Floor, Provincial Building
10320 - 99 Street
GRANDE PRAIRIE, Alberta
T8V 6J4

Phone: 529-3530

6th Floor, Provincial Building
9915 Franklin Avenue
FORT McMURRAY, Alberta
T9H 4C7

Phone: 329-5522

6th Floor, Provincial Building
4920 - 51st Street
RED DEER, Alberta
T4N 5Y5

Phone: 343-5170

Hygiene Regulations:
For more information concerning hygiene regulations please contact the nearest regional office of the Medical Services Branch, Occupational Health and Safety Division.

2nd Floor 9321 - 48th Street
1021 - 10th Avenue S.W.
CALGARY, Alberta
T2R 0B7

Phone: 297-2432

9321 - 48th Street
EDMONTON, Alberta
T6B 2R4

Phone: 427-8848

For information on Occupational Health and Safety education programs and information services, please contact the nearest regional office of the Education and Program Development Branch, Occupational Health and Safety Division.

1st Floor
1021 - 10th Avenue S.W.
CALGARY, Alberta
T2R 0B7

Phone: 297-7282

9321 - 48th Street
EDMONTON, Alberta
T6B 2R4

Phone: 427-4788

INDUSTRIAL STANDARDS REFERENCED OR ADOPTED BY REGULATIONS

Note: The industrial health and safety standards referenced or adopted by Occupational Health and Safety regulations may be purchased from the following sources:

AMERICAN STANDARDS INSTITUTE (ANSI)
c/o Standards Council of Canada
Standard Sales Service
2000 Argential Road, Suite 2-401
Mississauga, Ontario L5N 1V8

Phone: (416) 826-8110

(Prepayment is not required, but billing will be in Canadian currency.)

CANADIAN STANDARDS ASSOCIATION (CSA)
5524 - 99th Street
Edmonton, Alberta
T6E 3N7

Phone: (403) 436-8553
Telex: 037-2605

(Prepayment is required. MasterCard, Visa, American Express, cheques and cash are accepted.)

178 Rexdale Boulevard
Rexdale, (Toronto), Ontario
M9W 1R3

Phone: (416) 744-4000
Telex: 06-989344

(Orders of more than $125.00 may be invoiced. Prepayment is required on lesser amounts.)

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)
400 Commonwealth Drive
Warrendale, Pennsylvania
USA 15096

Phone: (412) 776-4841

(Standards must be ordered from the U.S.A., unless standards have been adopted by ANSI. If a standard has been adopted, it may be purchased from ANSI's Canadian distributor, the Standards Safety Council.)

UNDERWRITERS LABORATORIES (UL)
7 Crouse Road
Scarborough, Ontario
M1R 3A9

Phone: (416) 757-3611

(Prepayment is required on orders less than $50.00.)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
Batterymarch Park, Quincy
MA 02269 USA

Phone: (617) 328-9290

(Must be ordered from the U.S.A. Invoicing procedures are acceptable.)

Note: Copies of the Industrial Health and Safety Standards referenced or adopted by regulations are also available at the regional field office of the Inspection Branch (listed in the preceding section) and at the two regional Occupational Health and Safety Libraries, listed below:

5th Floor, Donsdale Place
10709 Jasper Avenue
EDMONTON, Alberta
T5J 3N3

1st Floor
1021 - 10th Avenue S.W.,
CALGARY, Alberta
T5R 0B7

PUBLIC HYGIENE PRACTICES

OCCUPATIONAL COURSE: ________________ STUDENT'S NAME: ________________________

INDUSTRY/BUSINESS VISITED	PUBLIC HYGIENE PRACTICES OBSERVED
1. Name: Address:	
2. Name: Address:	
3. Name: Address:	

Students must obtain permission from the following persons before visiting a workplace to collect this information:

- teacher or supervisor
- industry or business owner/manager.

SAFETY PROCEDURES AND REGULATIONS

Your occupational lab simulates business/industry. In any industry there are hazards to safety that make regulations and strict standards of behaviour necessary. If you decide not to follow these regulations, there is a good chance you will injure yourself. You may also cause a fellow student injury damage to expensive equipment. In industry, if a worker is found to be a hazard to fellow workers or to equipment, he/she may be fired or moved to another job. These following regulations are followed to prevent injury to yourself or others.

THE FOLLOWING REGULATIONS WILL BE ENFORCED IN THE LAB

1. Leave coats, sweaters and other personal belongings in a safe place. Do not bring them into the lab/workplace.
2. Shouting, whistling or other distracting noises are not permitted in the lab/workplace at any time.
4. Acceptable behaviour is expected in the lab/workplace at all times.
5. Equipment must not be operated without proper instruction and the permission of the teacher/supervisor.
6. Safety equipment/gear shall be used and procedures shall be followed at all times.
7. All accidents and breakages must be reported to the teacher/supervisor immediately.
8. Safety and clean-up is everyone's responsibility. A CLEAN WORK AREA IS A SAFE WORK AREA. If you make a mess, you are responsible for cleaning it up.
9. Use only the equipment, tools and supplies assigned to you or your group.
10. Respect the safety, rights and property of others.

The above regulations are essential for your own safety as well as that of your classmates/fellow workers.

SAFETY SUGGESTIONS FOR CLOTHING AND DRESS IN THE LAB

1. Sweaters, coats and jackets must be left in your locker.
2. Sleeves should be rolled tightly above the elbow.
3. Jewelry (rings, watches, bracelets, neck charms) should be removed and left in your locker; floppy belts tucked in.
4. Hair, if excessively long (shoulder length or longer), must be held back with a pin, hair net or elastic band.
5. Aprons, if worn, should be tied snugly at the back. All shirts or blouses should be tucked in.
6. Shoelaces must be tied tightly. High-heeled shoes or boots are not permitted. Thick leather shoes are preferable.
7. Eyeglasses should be held in place with a band around the head. (The same type of band as is worn for sporting activities.)

REMEMBER! 88 percent of all accidents can be prevented by avoiding **unsafe acts**.

THINK BEFORE YOU ACT! DON'T BECOME A STATISTIC!

SAFETY SUGGESTIONS FOR MATERIALS IN THE LAB

1. Place all flammable liquids, acids and solvents in appropriate containers and keep them in metal cabinets.
2. Large quantities of flammable material should be stored in an area separate from the lab proper.
3. Properly label and mark all containers containing flammable materials and acids. Mark all drawers, boxes, bins and cabinets containing such materials with the correct identity.
4. Wear protective clothing, such as a face shield, rubber gloves and an apron when mixing toxic or volatile chemicals or liquids.
5. Deposit all scraps, shavings, chips and oily waste material in proper containers. Oily rags should be deposited in a metal can.
6. When mixing acid and water, remember, ADD ACID TO WATER, never water to acid.
7. Supplies and materials should never be stored on top of lockers or cabinets.
8. Material, when stored, should not be out of reach.
9. Hands should be thoroughly washed after working with toxic chemicals such as film developers. Always be sure to wash your hands before leaving the lab.

SAFETY SUGGESTIONS FOR HAND TOOLS

1. Hand tools should be maintained continually and kept in sharp cutting condition.
2. Use the proper type and size of hand tools. Keep in mind the job being done and the stock being used.
3. When working with a sharp-edged tool, be sure that the sharp edge of the tool is pointing down and held away from the body.
4. When passing sharp-edged tools from one student to another, pass the handle first. Never throw a tool around.
5. When working with a sharp-edged tool on small stock, the stock should be firmly clamped in a vise and hands kept behind the cutting edge of the tool.
6. When using a chisel or other sharp-edged tool always pare or cut away from the body rather than toward it.
7. Wear safety glasses or shields when performing any operation that will result in chips, shavings or possible flying particles.
8. Never permit sharp-edged tools to project beyond the edge of the workbench.
9. Never carry sharp-edged tools in your hip pocket.
10. Keep your eyes constantly on the material being used.
11. If using portable electric hand tools, make sure that such tools are properly grounded.

SAFETY SUGGESTIONS FOR MACHINES

1. No machine should be operated without first receiving permission from the instructor.
2. The instructor should inspect both the stock and the machine to ensure that you have selected the proper machine for the job and that it is properly adjusted.
3. No machine is to be operated while the instructor is away from the lab.
4. Students are not to use any machine unless specific instruction has been given on the use of such a machine.
5. No electrical machine shall be adjusted, oiled or cleaned until it has come to a complete stop.
6. All safety guards and enclosures are to be in their proper positions when using a power-driven machine.
7. The power should be turned off when the job is complete. Never walk away from a machine and leave it running.
8. Before starting any job, make sure that the work table or surface of the machine is completely free of scraps, tools or stock.

9. All scraps of wood and refuse should be cleared from the floor around the machine.

10. Keep fingers away from all moving parts of the machine.

11. Students should not distract other students who are using a machine nor should the student using the machine engage in conversation with anyone while the machine is running.

12. Never begin to use a machine until it has reached top speed.

13. Never attempt to hasten the stopping of a machine by jamming stock into its moving parts or by grabbing the rotating spindle or belts.

14. When making special cuts and set-ups on a machine that may involve hazards, ask the instructor to examine and approve the set-up before starting work.

15. Check all stock to see that it is free from grit, nails and loose knots.

16. Safety goggles or safety shields should be worn at all times when operating any machine tools.

17. Be sure that everyone is clear of the machine before turning on the power switch.

18. Stay clear of a machine being operated by another student. The only student inside the safety zone should be the student operator of the machine.

19. Be agreeable with other students. Respect each other's rights and privileges. While in the lab, cooperate wherever and whenever possible.

THE ACCIDENT SEQUENCE

If it is true that accidents don't just happen, but are caused, how can the supervisor recognize the symptoms in time to counteract them effectively? People are generally the cause in a majority of the accidents and there are certain identifiable key factors of behaviour. When two or more of these factors come together, an accident occurs, which may or may not result in injury or property damage. Such a combination of factors is called an "accident sequence". The accident sequence can be demonstrated by the use of dominoes. Remember how you would set up a row of dominoes, push the end one and they all would fall, each one knocking over its neighbour? Well, here is the "accident sequence" set of dominoes.

HEREDITY is the set of characteristics with which people are born.

BEHAVIOUR is a set of characteristics that are developed or acquired as a result of life's experience.

UNSAFE CONDITION is any physical hazard or defect.

ACCIDENT is an unintended event that interrupts a normal procedure or practice.

INJURY is physical damage to a person or persons, and may be a serious result of any accident.

STOPPING THE ACCIDENT SEQUENCE

Proper selection of personnel plays a major role in the accident prevention sequence. Effective selection and testing techniques can help to single out the prospective employee who may require special training in safe procedures.

Proper attitude is a vital component of good on-the-job performance. Good habits in the workplace must replace indifference; an enthusiastic employee will display and develop a positive attitude in carrying out work assignments.

Reporting unsafe conditions is the responsibility of both the supervisor and the employee. Employees must be trained to do so.

Use of personal protective equipment is the means of preventing an injury or at least lessening the severity of it.

First aid training is invaluable to handle an on-the-job injury.

SUMMARY

An accident is an unintended event that interrupts a normal work procedure or practice and results in work stoppage, in damage to equipment or property, or in injury. Accident statistics indicate that for every single disabling injury there are 29 non-disabling injuries, and for every 30 injury cases there are 300 non-injury cases. To combat accidents, teachers and supervisors must recognize and accept that they have the primary responsibility of ensuring the safety of all the employees working under them. They must also realize that each and every accident to employees may stem from their failure to take the steps necessary to prevent them. Since the majority of accidents take place on the job, teachers and supervisors can greatly reduce the chances of accident by being aware of the factors involved in the accident sequence – heredity, behaviour, unsafe condition/act, accident, and injury, and by taking the necessary preventative measures, such as proper employee selection, developing proper attitude, reporting and eliminating unsafe conditions/acts and, in the case of an injury, rendering first aid immediately.

BEAT THESE ODDS!

For Every -------------------------------- 330 ---------------------------- Accidents

There Are -------------------------------- 29 ---------------------------- Minor Injuries

And -- 1 ---------------------------- Major Injury or Death

Thus, there are 300 accidents not resulting in injury. The odds are 300 to 30 or 10 to 1 that you will *not* be hurt in an accident. If you think these are good odds perhaps you had better think again!

CONCLUSION

You can eliminate 98 percent of all accidents that happen in the lab by:

1. **Avoiding Unsafe Acts.**
2. **Avoiding Unsafe Conditions.**

It is not enough that you know the safety rules, you must practise them constantly and be on your guard to eliminate the above two causes of all accidents.

KINDS OF FIRE EXTINGUISHERS

A fire extinguisher is a metal container filled with water and/or chemicals for use in fighting fires.

There are three kinds of extinguishers for home use. A Class A extinguisher is used **only** on fires caused by wood, cloth, and other ordinary burnable materials. A Class B extinguisher is used **only** on fires started by burnable liquids. A Class C extinguisher is **only** for fires involving electrical equipment. It is best to have at least one of each kind of fire extinguisher in your home. Some extinguishers are good for more than one kind of fire.

To operate a fire extinguisher, hold it upright, and pull the locking pin. Aim the nozzle at the base of the fire. Squeeze the handle and use a side-to-side motion over the flame.

Below is a picture of a fire extinguisher with its parts labelled.

Answer the questions below with A, B, or C, depending on the kind of extinguisher you would need to put out the particular type of fire.

1. cooking grease _____
2. short circuit in a motor _____
3. light switches _____
4. gasoline _____
5. rubbish fire _____
6. vegetable oil _____
7. electrical wiring _____
8. fire in a wastebasket _____
9. paper _____
10. oils _____

FIRST AID PROCEDURES

After you have received instruction in and had a demonstration of proper procedures to follow in emergency situations, use this procedures chart to maintain a record of your own first aid proficiency. When you have correctly demonstrated the proper procedure to follow in each emergency situation, your teacher or supervisor will initial the "completed" column.

EMERGENCY	FIRST AID PROCEDURE	DATE	COMPLETED

2. ORGANIZATIONAL SKILLS

All occupations are composed of a number of different tasks which a worker is expected to perform. Every task requires some planning and organization if it is to be completed on time and to the satisfaction of self and others.

The ability to plan and organize work and to practise ethical behaviour in the workplace are important skills in all occupations.

The concepts and related skills and attitudes included in this unit are:

A. Work Ethics

B. Planning and Organization

C. Time Management

D. Task Management

E. Work Standards.

RESOURCES

STUDENT RESOURCE

Working: Today and Tomorrow (Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

Correlation of Learning Objectives with Student Resource

Concepts, Skills and Attitudes	*Working: Today and Tomorrow*
1. Organizational Skills	
A. Work Ethics	Chapters 8, 10 " The Importance of Attitude"
B. Planning and Organization	Chapter 12 "The Benefits of Planning"
C. Time Management	Chapter 12 "Your Time"
D. Task Management	Chapter 9 "Getting Ahead in Your Job"
E. Work Standards	Chapter 11

TEACHER RESOURCES

- Resource 18, "Rights and Obligations of Employees and Employers"
- Resource 19, "Ethical Characteristics of Behaviour"
- Resource 20, "Evaluation Chart: Ethical Characteristics of Behaviour"

- Resource 21, "Positive and Negative Ethical Characteristics of Behaviour"
- Resource 22, "Reasons for Working"
- Resource 23, "Alberta Human Rights Commission"
- Resource 24, "Project/Task Plan"
- Resource 25, "Positive and Negative Feedback: A Record of Observations"
- Resource 26, "Time Grid"
- Resource 27, "Time Card"
- Resource 28, "Interview Guide: The Importance of Time in the Workplace"
- Resource 29, "Types of Service"
- Martin, W.B. *Quality Customer Service*. Crisp Publications, Inc., 1987
- Statements of ethics from related occupations/organizations
- Community partners.

A. WORK ETHICS

Each person lives by a set of personal ethics that help shape individual behaviour at home, in the school, in the community and in the workplace.

In the world of business and industry, ethics often include:
- statements concerning desirable and expected employee conduct
- the way in which each employee acts toward work and relates to others in the workplace.

An understanding of the concept of ethics and the practice of ethical behaviour in the workplace are essential entry-level occupational skills.

The concepts, skills and attitudes related to work ethics developed in this unit include:

1. Recognizes ethics of related occupations
2. Demonstrates willingness to practise ethical behaviour
3 Demonstrates awareness of the needs of others
4. Recognizes the meaning of work
5. Demonstrates tolerance and understanding of other cultures
6. Demonstrates pride in self
7. Accepts advice.

1. ETHICS OF RELATED OCCUPATIONS

Each person, profession and occupation, usually has its own set of ethics. Ethics may be formal (i.e., written for all to see) or informal (i.e., unwritten but generally understood, accepted and practised).

Statements of ethics commonly include an outline of:
- rights
- responsibilities
- acceptable relations with others
- acceptable dealings with others.

Suggested Activities/Community Partnerships

1. Discuss:
   - Why are codes of ethics used in the workplace?
   - Should codes of ethics be formal; that is, in written documents? Why?

2. Invite community partners from businesses/industries:

   a. to discuss the topic: Ethics in the ____ workplace.

   b. to bring statements of conduct or ethics that apply to workers in related occupations.

   Community partners may include representatives of:
   - labour unions
   - craft and trade associations
   - professional associations
   - Alberta Consumer and Corporate Affairs.

3. Brainstorm and record responses to the topic:
What statements would you include in a code of ethics for the ___ trade/craft/occupation?

4. a. What is the Alberta Employment Standards Code?
(See Resource 18, "Rights and Obligations of Employees and Employers".)

b. Discuss: How does the Employment Standards Code protect the rights of employees and employers?

2. PRACTISING ETHICAL BEHAVIOUR

Statements of ethics are more than just written or verbal statements about behaviour; they **guide our relationships with others and the way we approach tasks.**

The practice of ethical behaviour is essential to getting and retaining a job or operating a small business and will usually determine how successful people are in building and maintaining good relationships.

The characteristics of ethical behaviour include:

- dependability
- enthusiasm
- honesty
- cooperation
- courtesy
- self-control
- hard work
- initiative
- loyalty
- adaptability
- patience
- tact
- reliability
- integrity

Student Activities/Community Partnerships

1. a. Use a dictionary to define the ethical characteristics you do not understand.

b. Use Resource 19, "Ethical Characteristics of Behaviour", to gain a better understanding of ethical behaviour as it applies to this particular course.

2. a. Use Resource 20, "Evaluation Chart: Ethical Characteristics of Behaviour", to maintain a monthly evaluation of your ethical behaviour in the school lab and in the workplace.

b. Which characteristics of your ethical behaviour have improved during the past year? Suggest reasons for the improvements.

c. When participating in an extended community partnership activity (e.g., one week or longer in one workplace), suggest to your supervisor that you would like him or her to evaluate your ethical behaviour as well as other aspects of your performance on the job. Provide the supervisor with a copy of Resource 20.

3. a. Read Resource 21, "Positive and Negative Ethical Characteristics of Behaviour."

b. Do you agree with the statements? Why or why not?

3. THE MEANING OF WORK

Work means different things to different people. Research indicates that most workers choose a particular career and select specific jobs because of the job satisfaction they achieve by doing tasks they enjoy.

The ability of students to recognize that the meaning of work is different for each person and different at different times for each person is important to making good job/career choices and ensuring job/career success.

The level of an individual's job/career satisfaction may depend upon:

- wages received
- working conditions and benefits
- time and space to do the job
- opportunities for continuing education
- opportunities for promotion
- job security
- levels of recognition/appreciation
- amount of respect/courtesy shown
- management-worker relationships

These factors are considered when people decide whether or not to take or change jobs/careers.

Suggested Activities/Community Partnerships

1. Discuss:
   - What does work mean to me?
2. a. Use Resource 22, "Reasons for Working", to chart the importance to you of each of the job satisfaction factors listed.

   b. What are the three most important factors?

   c. What are the three least important factors?
3. Interview three workers in related occupations and request that they complete a copy of Resource 22, "Reasons for Working".

   a. How do these three workers' reasons for working compare with one another?

   b. How do these three workers' most important reasons for working compare with the most important reasons for working that you previously indicated?
4. a. Select one of the course related jobs that is of most interest to you and write the reasons why this job interests you.
   Consider:
   - the short- and long-term advantages and disadvantages
   - the opportunities for continuing education
   - the opportunities for promotion.

4. RECOGNIZING THE NEEDS OF OTHERS
5. TOLERANCE AND UNDERSTANDING

Canada is a cultural mosaic and because Canada is home to people of many different colours, creeds, languages and ethnic origins, students need to learn tolerance and understanding of others.

Tolerance is the willingness to be patient toward people who differ from you in appearance, dress, opinion, behaviour, etc.

Understanding is the ability to learn from others and to appreciate that others have the right to be different and to act and think differently from you.

An example of intolerant behaviour that shows a lack of understanding is the use of stereotyping. Stereotypes impart fixed, overly simplified and often inaccurate ideas about people.

Stereotypes can lead to various types of discrimination in the workplace including:

- sexual discrimination
- age discrimination
- ethnic discrimination
- religious discrimination.

The Alberta Human Rights Commission monitors discriminatory behaviour in the province. In Alberta, The Individual's Rights Protection Act (IRPA), is designed to protect people against discrimination.

> **The Act is not designed to control prejudice – what people think – but to prohibit discrimination – what people do.**

Suggested Activities/Community Partnerships

1. Read Resource 23, "Alberta Human Rights Commission".
2. a. Have you or your parents/guardians ever been discriminated against? Relate examples of discriminatory behaviour to the rest of the class.

   b. What did you and/or your parents/guardians do in response to the discriminatory behaviour?

   c. What could/should you/they have done?
3. a. Brainstorm and record examples of each of the following types of discriminatory behaviours:
      - sexual
      - age
      - ethnic
      - religious.

   b. Discuss:
      - What should a person do if faced with one or other of these discriminatory situations? (Read Resource 23, "Alberta Human Rights Commission".)

6. PRIDE IN SELF
7. ACCEPTING ADVICE

A major focus of each occupational course at the Grade 11 level of the IOP is to continue to build students' self-esteem based on foundations received in Grades 8, 9 and 10 of the program.

Self-esteem is a feeling of self-respect that includes:

- a sense of security
- a sense of identity or self-concept
- a sense of belonging
- a sense of purpose and direction
- a sense of personal competence.

Teachers are encouraged to focus on the development of these characteristics by:

- enriching the classroom/school lab environment (see Suggested Teaching Strategies, "Improving the Instructional Environment")
- reinforcing positive and successful behaviour (see Suggested Teaching Strategies, "Positive Self-Talk"; "Reinforcing the Positive")
- using individualized and small group instruction
- integrating generic skills into practical learning activities
- encouraging students to seek advice from peers, the teacher, community partners and others by reinforcing the value of each question asked by students
- reinforcing through community partnership activities, the value and transferability of the concepts, skills and attitudes they are developing in each of their courses
- encouraging students to think critically in order to solve problems
- fostering peer-support systems within the class and the school.

Suggested Activities/Community Partnerships

1. Use the self-evaluation charts contained in each student workbook to maintain an ongoing record of progress and achievement.

2. a. Secure a mentor (i.e., a community partner) and work with the mentor to design, develop and produce a product or service.

   b. Have students display the product produced or offer the new service to community partners in both the school and the community.

3. Consult with classmates on the appropriateness of using various forms of recognition to acknowledge peer achievements; e.g.,
   - student of the week or month
   - best product or service
   - best attendance
   - highest productivity
   - best maintained work area.

   (Note: Posters, plaques or class produced products may be used to acknowledge exemplary student performance in many contexts.)

4. As a class or in cooperation with students and teachers in other classes in the school, organize and implement an activity to acknowledge the vital role that community partners play in your education. Activities may include:
   - hosting an awards evening
   - organizing an appreciation breakfast, lunch or dinner
   - designing, printing and distributing community partnership appreciation certificates.

B. PLANNING AND ORGANIZATION

Planning and organizational skills relate to the ability to group and arrange people and/or materials so that, together, they contribute to the efficient and effective operation of a business or an industry.

Students who develop effective planning and organizational skills are better able to seek, attain and retain employment.

The concepts, skills and attitudes developed in this unit include:

1. Develops a basic task plan
2. Implements a basic task plan
3. Evaluates the outcome of a basic task plan
4. Recognizes the meaning of feedback.

1. DEVELOPS A PLAN
2. IMPLEMENTS A PLAN
3. EVALUATES THE OUTCOME OF A PLAN

Planning is a process that involves:

- identifying the job to be done
- identifying the components of the job
- putting the job components in usable order
- seeing that the job is completed within a given time.

Because many tasks in occupational courses can be complex, it is necessary for students to understand and to practise each step of the planning process repeatedly until an acceptable level of competency is achieved.

The job sheets contained in each student workbook follow a similar design:

- name of job (i.e., what is the desired end product?)
- equipment, tools and supplies required to do the job
- procedure (i.e., the sequenced outline of the steps that should be followed to complete the job)
- evaluation (i.e., the standards by which the quality of the product made or service provided is judged).

When developing the concepts, skills and attitudes related to planning and organizing, encourage students to:

- identify a project or task they would like to work on
- work through each stage of the planning, organization, implementation and evaluation processes.

Suggested Activities/Community Partnerships

1. a. Describe, in writing, any project or task that you have been involved in outside of the school. Include details about:
    - the purpose of the project
    - the equipment, tools and supplies used
    - the procedure followed
    - the quality of the finished product.

   b. What would you do differently if you repeated the project or task again? Why?

2. a. Working either as a class or as a member of a small group, develop a project or task plan for an activity you wish to complete (use Resource 24, "Project/Task Plan", as a guide). You may wish to invite a community partner to act as a member of the project team. (Note: The community partner may be asked to participate in identifying the project or task to be undertaken, and to continue acting as a mentor during the planning, implementation and evaluation stages of the project.)

b. As you develop the plan, consider the following:
- are the needed equipment, tools and supplies readily available?
- approximately how much time will it take to produce a finished product?
- is the cost affordable?

c. Implement the plan and produce the product or service.

d. Evaluate the product or service. Some or all of these factors may apply:
- does it look like the original sketch?
- does it conform to specifications (e.g., size, colour, weight, proportions)?
- what did it cost to make?
- can it be used for the stated purpose?
- were users satisfied with the product or service?
- would you purchase this product or service? would others?

4. THE MEANING OF "FEEDBACK"

The Gage Canadian Dictionary (1983) defines the term "feedback" as "information on the results of one's actions that will influence one's future decisions or actions".

Feedback may be positive (feedback that provides praise and tends to encourage similar decisions and actions in the future) or negative (feedback that provides criticism and tends to discourage future decision making and actions). Both positive and negative feedback may be communicated in either or both verbal and non-verbal forms as shown in the following chart.

FORM OF COMMUNICATION	POSITIVE FEEDBACK	NEGATIVE FEEDBACK
Verbal	Praise (e.g., "Well done!") Encouragement (e.g., "You've made an excellent effort!")	Criticism (e.g., "That's terrible!") Discouragement (e.g., "You didn't even try!") Threat (e.g., "You make the same mistake again, and . . . ")
Non-verbal	A smile Pat on back Display of student's work Encouraging comments on report cards Giving each student personal attention	A scowl or frown Threatening gesture Discarding student's work Discouraging comments on report cards Indicating that no time is available for personal attention

Research indicates that IOP students tend to respond more positively and achieve at a higher level when positive feedback is used regularly.

Positive feedback tends to help IOP students develop a sense of:
- security
- identity (self-concept)
- belonging
- purpose
- personal competence.

Teachers may wish to review the literature and experiment with various schedules of reinforcement in order to maximize the potential of each student and encourage students to give positive feedback to each other. Reviewing the Suggested Teaching Strategy, "Reinforcing the Positive", may prove beneficial.

Suggested Activities/Community Partnerships

1. Discuss:
    - What is feedback?
    - What effect does feedback have on the way people behave?
    - What is the difference between positive and negative feedback?

2. Complete the following sentences:

    a. Positive feedback makes me _ _ _ _ because it _ _ _ _.

    b. Negative feedback makes me _ _ _ _ because it _ _ _ _.

3. Brainstorm and record the ways in which feedback is given in related occupations. Categorize the responses into two groups: Positive Feedback Techniques and Negative Feedback Techniques.

4. Participate in a community partnership that enables you to job shadow a worker in an occupation. Use Resource 25, "Positive and Negative Feedback: A Record of Observations", to record the types of feedback you observe during a one-day job shadowing learning experience.

C. TIME MANAGEMENT

In business and industry, time management refers to how much work can be performed in a given number of hours, days, weeks, months or years. In many occupations, workers are expected to be at their workplace by a specified time, take breaks and lunch at specified times, and remain at work for a specified time. Failure to conform to time standards may result in loss of pay, job or business failure.

Effective use of time may affect:

- **the job search process**
- **job retention**
- **time on task**
- **wages earned**
- **prospects for promotion**
- **success as an entrepreneur.**

The concepts, skills and attitudes related to time management developed in this unit include:

1. Identifies time-task relationships
2. Demonstrates effective time management.

1. TIME-TASK MANAGEMENT
2. EFFECTIVE TIME MANAGEMENT

Time-on-task refers to the amount of time an employee devotes to the tasks he or she is expected to complete in a given period of time (e.g., hour, day, week, month). Employees who focus their attention on assigned tasks are considered to be productive and are sought after by employers.

Productive employees/employers:

- follow instructions and workplace rules
- cooperate with others
- concentrate on completing assigned tasks within given time lines
- are dependable (i.e., they can be relied upon to do their best).

Effective time management may be problematic for some students. For various reasons, individual students may refuse to participate in a specific class or field experience. Experience with "at-risk" students indicates that encouragement rather than punishment tends to get more positive results. Publicly labelling or identifying a student as a non-participant may reinforce the student's negative behaviour.

Irregular attendance and lack of punctuality may be demonstrated by some students. Field experiences may help students to appreciate the consequences of poor attendance and tardiness. Teachers are encouraged to:

- discuss with students and establish attendance and punctuality expectations early in the course
- discuss and establish possible consequences of poor attendance and tardiness
- provide a statement of expectations and the consequences of failure to each student
- be consistent in applying consequences
- be understanding and flexible when establishing expectations and consequences.

Suggested Activities/Community Partnerships

1. Maintain a record of how you spend your time in school/at work.
    a. Use Resource 26, "Time Grid", to chart your efficiency in completing tasks on time.
    b. For each job sheet in the student workbook, record the time the job is started and when it is completed, and then calculate the time taken to complete the job. With practice, the time taken to complete a job should decrease.
    c. Use Resource 27, "Time Card", to record the hours you spend at work; e.g., community partnerships, part-time job, volunteer work.

2. Discuss:
    - What is the relationship between time-on-task and skill development?
    - Does the expression "Practice makes perfect" apply to the way you learn? Give examples.

3. Use Resource 28 "Interview Guide: The Importance of Time in the Workplace", as a basis for questioning community partners about the importance of the wise use of time in the workplace.

D. TASK MANAGEMENT

Task management, like time management, is a component of the planning process. Knowing what to do, how to go about it, and then doing it are important skills in all occupations.

The ability to stay on task is a learned and complex skill. Most people do their best work when the work they are doing is meaningful to them.

Work tends to be meaningful when a person has:

a. knowledge related to the work, including
  - what has to be done
  - how it has to be done
  - where it has to be done
  - who wants the task done.

b. a positive attitude toward work, including
  - interest in the work
  - willingness to learn.

c. good work habits, including
  - safe use practices
  - personal and public hygiene practices
  - respect for self and others
  - good work ethics
  - attention to task.

Both time and task management concepts, skills and attitudes should be:

- taught as integral components of each occupational course
- a major component for evaluation in each occupational course
- reinforced through field experiences and other forms of community partnerships.

The concepts, skills and attitudes related to task management developed in this unit include:

1. Demonstrates perseverance.
2. Prepares equipment, tools and supplies required for the task
3. Practises positive work habits
4. Defines the practice of service in the service industries.

1. PERSEVERANCE

Good work habits and the ability to persevere are learned through good work experiences.

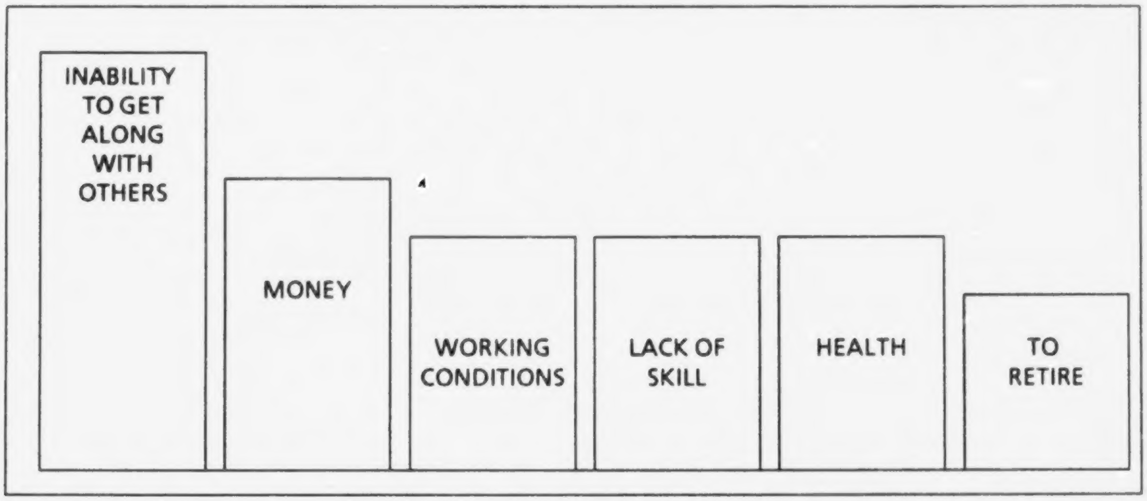
Perseverance and attention to task are essential if a student is to progress to employment readiness. Employers have repeatedly indicated that workers' willingness to learn and their genuine interest in the work to be done are often more important than possessing specific work skills.

Encourage students to explore occupations about which they may have little or no knowledge. It is through exposure to the range of occupational courses available in each high school that IOP students may be better able to select a career path that is of interest to them, and to demonstrate willingness to engage in further education and training. (Community partnership learning arrangements may be possible if the high school is not able to offer one or more of the approved IOP occupational courses.)

Suggested Activities/Community Partnerships

Community partnerships provide students with the opportunity to observe role models both on the job and in other settings.

1. Brainstorm and record examples of perseverance/attention to task in occupations.
2. The following chart depicts the major reasons why people leave their jobs (i.e., leave of their own free will or are fired).
   a. Why is the ability to get along with others important in the workplace?
   b. What can be done to improve relationships between co-workers?
   c. Why do some people spend their entire career working in one organization? What are the advantages/disadvantages of continuing to work in one organization throughout a career?



2. EQUIPMENT, TOOLS AND SUPPLIES
3. POSITIVE WORK HABITS

In each occupational course, students are required to become familiar with equipment, tools and supplies related to an occupational cluster and to develop positive work habits.

The concepts, skills and attitudes related to each occupational course are outlined in the:
- ***Program of Studies/Curriculum Guide*** **(Appendices 1-20)**
- **Work Skills Profile contained in each student workbook.**

Suggested Activities/Community Partnerships

1. Visit a variety of community partners, and

    a. identify and record examples of perseverance and good work habits in the workplace

    b. discuss these observations with class members and community partners

    c. model positive behaviours developed at community partnership sites when completing tasks at home, in school and in the workplace.

4. THE PRACTICE OF SERVICE IN THE SERVICE INDUSTRIES

Service is a component of most occupations. Each of the eight occupational clusters and twenty occupational courses that comprise the IOP occupational component contains occupations in which the concepts, skills and attitudes related to service may be learned.

The ability to provide good service is a learned activity and covers two dimensions:

- Personal dimension — refers to the knowledge, skills and attitudes communicated to customers by the service person, such as friendliness, genuine interest in customer needs, tact, knowledge about the product or service being offered, helpfulness.

- Procedural dimension — refers to the knowledge, skills and attitudes used to prepare for and provide service. After a sale, this includes:
    - safe use practices
    - efficiency
    - proper use of equipment, tools and supplies
    - following procedures
    - consistency
    - organization.

Suggested Activities/Community Partnerships

The resource, *Quality Customer Service* (Martin, 1987) may be used to provide an increased focus on the concepts, skills and attitudes related to customer service.

1. Brainstorm and record responses to the following questions:
    a. In the context of the course, what is the meaning of the word "service"?
    b. What types of service(s) are provided in related occupations?
    c. Who buys the service(s) provided in related occupations?
2. a. Visit three community partners and observe the types and quality of service(s) provided. Use Resource 29, "Types of Service", to record your observations and impressions.
    b. Based on your observations and impressions, how would you improve the quality of service you observed in the:
        - personal dimension?
        - procedural dimension?
3. a. Survey twenty people in the school (e.g., teachers, students and support staff) and ask them: What does good service mean to you?
    b. Categorize each response as belonging to either the personal dimension or procedural dimension.
    c. Share and discuss your survey results with classmates.
    d. Based on your own and your classmates' surveys, what was the most commonly expressed component of good service?

E. WORK STANDARDS

Work standards are the quality, safety and sanitation checks that are used by business and industry to ensure efficient and effective operations. Work standards are usually established by people representing the following agencies:

- governments (i.e., federal, provincial, municipal)
- labour unions
- professional associations
- business and industry associations.

Students need to appreciate the purpose of work standards and be able to work to acceptable standards in order to attain and retain employment.

Quality standards include:

- produce quality (e.g., saleability of the goods or services produced)
- process quality (e.g., organizational skills, service, salesmanship).

Product Quality Plus Process Quality Equals Profit

Safety standards include:

- Safe use practices (e.g., equipment, tools and supplies)
- Work area safety (e.g., control of noise, air, waste pollution, fire and accident safety procedures)
- Safe storage and handling practices (e.g., control of hazardous products and wastes).

Sanitation standards include:

- personal hygiene
- public hygiene.

Proper adherence to good work standards will usually result in safe and secure working conditions, satisfied customers and profit for the business.

The concepts, skills and attitudes related to work standards developed in this unit include:

1. Describes work standards used in related occupational areas
2. Demonstrates acceptable work standards
3. Describes the relationship between work standards, service and profit.

RESOURCES

- Student workbooks
- Community partners.

1. WORK STANDARDS IN RELATED OCCUPATIONS

Work standards are used as guidelines and to control the way employers and employees behave in the workplace. These standards include:

- Quality standards (process quality and product quality)
- Safety standards
- Sanitation standards.

Suggested Activities/Community Partnerships

1. a. Brainstorm:
   - What are the work standards expected in occupations related to the course?

   b. Categorize the responses into three groups:
   - quality standards
   - safety standards
   - sanitation standards.

2. Participate in a field experience (e.g., job shadowing, work placement) and observe the work standards followed by employees in and around the work area. Record your observations on the Work Standards Observation Chart (Resource 30, page 124).

3. a. Discuss:
   - What are the advantages/disadvantages of having similar work standards in different but related businesses (e.g., quality, safety and sanitation standards are usually similar at all fast-food outlets belonging to the same company)?

   b. If you were an entrepreneur in a business, what work standards would you want your employees to meet? Why?

2. ACCEPTABLE WORK STANDARDS
3. THE RELATIONSHIP BETWEEN WORK STANDARDS, SERVICE AND PROFIT

Each occupational course provides students with opportunities to learn what are considered to be acceptable work standards in the school lab and/or in workplaces.

The student activities and job sheets contained in the student workbook developed for each Grade 11 occupational course provide opportunities for students to demonstrate acceptable work habits and to evaluate their work standards. These activities and job sheets may be complemented and supplemented with additional community partnership activities.

Suggested Activities/Community Partnerships

1. What effect would a lack of concern about or a failure to follow work standards have on:
   - quality?
   - customers?
   - profits?

   (Relate the discussion to the equation:
   Product Quality plus Process Quality equals Profit
   [PQ + PQ = P]).

2. Read Resource 18, "Rights and Obligations of Employees and Employers" and answer the following questions:

   a. What standards are identified in this resource?

   b. What is the address of the Employment Standards Branch nearest to your school?

   c. Based on what you have read in this resource, do you believe that one of your rights has not been met in an employment situation? Describe the situation and why you believe one of your rights was not met.

RIGHTS AND OBLIGATIONS OF EMPLOYEES AND EMPLOYERS

ALBERTA'S EMPLOYMENT STANDARDS CODE

The Employment Standards Code sets out the minimum provisions that apply to Alberta employees and employers under provincial jurisdiction. The Employment Standards Code is administered by the Employment Standards Branch of Alberta Labour.

EDUCATION AND COMMUNICATION

Successful employment relationships require open and honest communication between employees and their employers. Both parties have rights and obligations. Positive relationships are best achieved when employees and employers understand their rights and live up to their obligations. Employers have the right to establish conditions of employment and have an obligation to ensure conditions of employment are not less than the minimum legal standards. Employees have an obligation to provide a level of service consistent with the established conditions of employment. Awareness, mutual respect and open communication help build good employee-employer relations.

GROUP TERMINATIONS

Employers are required to provide the Minister of Labour with four weeks notice of their intention to terminate the employment of 50 or more employees in a single location within a four-week period. This provides time for employers and employees to be made aware of existing government employment adjustment and retraining programs.

WAGE RATE CHANGES

If an employer wishes to reduce an employee's wage rate, overtime rate or entitlements, the employee must be informed before the pay period in which the change is to take place.

EMPLOYMENT RECORDS

An employer must record the hours of work of employees daily. Additional records that must be maintained include: details of wage and overtime rates, vacation and general holiday payments and deductions from employee earnings. Employees must receive a detailed written statement of earnings and deductions for their retention each pay period.

MINIMUM WAGES

Effective September 1, 1988, Alberta's minimum wage rates are:

- $4.00/hour for students under 18 years of age, employed outside normal daily school hours, or on a weekend, a vacation period or any other day the school is officially closed
- $4.50/hour for all other employees.

Certain salespersons receive a minimum of $180.00 per week.

Employees must receive a minimum payment when they report for work and no work is provided. The minimum wage may be reduced by specific amounts for meals and lodging.

HOURS OF WORK AND OVERTIME

Hours of work must be confined within a period of twelve consecutive hours in any one day.

Overtime Pay

If an employee works forty-four hours or fewer in a one-week period, but works more than eight hours on any day, overtime pay shall be paid for each hour in excess of eight hours per day.

If an employee works more than forty-four hours in a one week period, the hours of work in excess of eight hours in each day shall be totalled and the hours of work in excess of forty-four hours in the week shall be calculated. The overtime rate shall be paid for whichever is greater.

Employees must receive not less than one and a half times their regular wage rate for overtime pay.

Overtime Agreement

Employees and employers may enter into a written overtime agreement providing it is not a condition of employment and is accepted by either the individual or a majority of employees affected. With an agreement instead of overtime pay, employees will receive time off with regular pay equal to the number of overtime hours worked.

Compressed Work Week

A compressed work week schedule provides increased daily hours of work in consideration for increased rest days. Alberta Labour's Director of Employment Standards must be notified before the schedule is implemented.

HOURS OF REST

An employer must provide at least one day of rest in each week. Rest days may be accumulated for up to four weeks and given as consecutive days off.

Employees must receive a half-hour rest period, paid or unpaid, during each shift in excess of five consecutive hours of work. Some exceptions apply. Refer to Part 2, Division 5 of the Employment Standards Code.

VACATIONS

Employees are entitled to a minimum of two weeks' vacation with pay after one year of employment, and three weeks' vacation with pay after five years of employment with an employer.

At the written request of an employee, the employer may grant the employee's annual vacation in periods of not less than one day. The employer has final approval of the time when the annual vacation is to be taken.

GENERAL HOLIDAYS AND GENERAL HOLIDAY PAY

In Alberta the following are general holidays: New Year's Day; Good Friday; Victoria Day; Canada Day; Labour day; Thanksgiving Day; Remembrance Day; Christmas Day; and any other day designated by the employer.

Employees who have worked for an employer thirty days in the twelve-month period before the holiday are entitled to general holidays and general holiday pay.

When the holiday falls on a regular work day and the employee is not required to work, the employee will receive a regular day's pay. If employees are required to work in the holiday they must receive one and a half times the regular rate of pay for all hours worked.

If a general holiday falls during an employee's annual vacation, the employer must extend the employee's vacation by one day with pay. Alternatively, by agreement, the employer must provide an additional day off with pay before the employee's next annual vacation.

PARENTAL BENEFITS

Maternity Leave

Women employed with the same employer for twelve months are entitled to eighteen weeks of unpaid maternity leave. Leave may begin at any time during the twelve weeks before the estimated date of birth. The employee must give her employer two weeks written notice of the date she intends to begin leave and of the date she intends to resume employment or resign.

Adoption Leave

A male or female employee employed twelve months with the same employer is entitled to eight weeks of unpaid leave when adopting a child under three years of age. An employee must give the employer written notice of leave at least two weeks before the expected custody of the child. If two weeks notice cannot be given, the employer must be notified immediately after notice of the adoption is received. The employee must provide two week's written notice before returning to work or resigning.

Employees returning from maternity or adoption leave must be reinstalled in the same or a comparable position with the same wages, entitlements and other benefits as received when the leave began.

EMPLOYMENT OF ADOLESCENTS AND YOUNG PERSONS

Persons 12 to 15 years of age may:

- make deliveries for a retail store
- deliver newspapers or flyers, or
- be a clerk in an office or retail store

if the employment is not injurious to the adolescent's life, health, education or welfare. Other similar types of work may be approved by the Alberta Labour's Director of Employment Standards. The parent or guardian of any adolescent so employed must agree to the employment and provide written consent to the employer.

Employees 12 to 15 years of age can work only two hours on a school day and a maximum of eight hours on a non-school day. They cannot work between the hours of 9:00 pm and 6:00 am.

Employees 15 years or older but under 18 years cannot be employed between the hours of midnight and 6:00 am at, or in connection with:

- any retail store selling food or beverages or any other merchandise;
- a retail business selling gasoline or other petroleum products; or
- a motel, hotel, inn, etc.

Employment is permitted in such premises between 9:00 pm and midnight if the employee works with and is in the continuous presence of at least one other individual 18 years old or older.

TERMINATION OF EMPLOYMENT

Employees wishing to terminate their employment must give the employer written notice of their intent to terminate of at least:

- one week, if employed more than three months but less than two years
- two weeks, if employed two years but less than four years
- four weeks, if employed four years but less than six years

- five weeks, if employed six years but less than eight years
- six weeks, if employed eight years but less than ten years
- eight weeks, if employed over ten years.
- the wages the employee would have earned for the applicable period of notice
- a combination of written notice of termination and the wages the employee would have earned for the applicable period of notice.

No notice of termination is required if the employee is employed for three months or less. Other exemptions apply. Refer to Part 2. Division 9 of the Employment Standards Code.

Note: This information is designed to highlight the key provisions of the Employment Standards Code and assist you in understanding your rights and obligations in the workplace. If you have further questions or require specific information, please refer directly to the Employment Standards Code or contact the Employment Standards Branch in your area.

Reprinted from *Rights and Obligations of Employees and Employers.* Copyright November 1988 by Alberta Labour. Reprinted with permission.

ETHICAL CHARACTERISTICS OF BEHAVIOUR

Beside each characteristic of ethical behaviour:

a. Rank order each characteristic in the context of the course and occupation (e.g., write "1" beside the most important characteristic, "2" beside the next most important characteristic).

b. Write a sentence to describe an ethical behaviour that demonstrates the characteristic under discussion.

ETHICAL CHARACTERISTIC	RANK ORDER	BEHAVIOUR
Dependability		
Enthusiasm		
Honesty		
Cooperation		
Courtesy		
Self-control		
Hard work		
Initiative		
Loyalty		
Adaptability		
Patience		
Tact		
Reliability		
Integrity		

EVALUATION CHART:
ETHICAL CHARACTERISTICS OF BEHAVIOUR

On the last school day of each month evaluate your ethical behaviour against the characteristics listed below. Compare your evaluation with the evaluation given by your teacher/supervisor.

Key:
Excellent = 5
Very Good = 4
Fairly Good = 3
Not So Good = 2
Poor = 1

Ethical Characteristic	STUDENT'S AND TEACHER'S/SUPERVISOR'S EVALUATION																			
	Sept.		Oct.		Nov.		Dec.		Jan.		Feb.		Mar.		Apr.		May		June	
Dependability																				
Enthusiasm																				
Honesty																				
Cooperation																				
Courtesy																				
Self-control																				
Hard work																				
Initiative																				
Loyalty																				
Adaptability																				
Patience																				
Tact																				

Has your ethical behaviour improved during the course? ______________________________

Where has your ethical behaviour changed the most? Why?

____

____

____

____

____

Student's Signature ____________________ Teacher's Signature ______________________

POSITIVE AND NEGATIVE ETHICAL CHARACTERISTICS OF BEHAVIOUR

POSITIVE	NEGATIVE
Workers who are committed: - try to make the company look good - work hard for the organization - do their best - dress appropriately	Workers who lack commitment: - criticize their organization to outsiders - are concerned mostly about what the organization can do for them
Workers who are enthusiastic: - are interested in their work - share their ideas - are cheerful - give help to others	Workers who are unenthusiastic: - do only enough to get by - don't care about the quality of the work - may be uncooperative - are complainers
Workers who are dependable: - arrive at work on time - finish assigned work on schedule - call when they must miss work due to illness - fulfil commitments - use sick days only for legitimate illness or injury	Workers who are not dependable: - arrive at work late - do not finish assigned work - miss work without notifying the employer - are often absent from work - make excuses - do not follow through on commitments
Workers who are honest: - admit their mistakes - express their opinions	Workers who are dishonest: - take tools or materials for their own use - try to get away with as much as they can
Workers who are willing to learn: - listen carefully to instructions - ask questions when they do not understand - try new things - learn from their own mistakes	Workers who are unwilling to learn: - ignore instructions - dislike taking advice
Workers who are willing to accept criticism: - are open to suggestions made by others - learn from suggestions - use constructive criticism to improve the quality of the work	Workers who are unwilling to accept criticism: - become angry or sulk when criticized - are not receptive to learning new things - reject suggestions - tend to repeat their mistakes

115

REASONS FOR WORKING

1. Rank each reason listed below using the scale:

5 = very important
4 = important
3 = somewhat important
2 = not very important
1 = not important at all

REASONS FOR WORKING	RATING
Financial Security – the need to earn enough money to live on, on a continuing basis.	1 2 3 4 5
Recognition and Approval – the need to have others know and approve of the work you do.	1 2 3 4 5
Mastery and Achievement – the need to perform well (in your opinion).	1 2 3 4 5
Dominance – the need to have some power or influence and control over others.	1 2 3 4 5
Status – the need to acquire and maintain a certain standard of living and respect from others.	1 2 3 4 5
Self-Expression – the need to express your skills, feelings and personality in the work you do.	1 2 3 4 5
Friendship – the need to be liked and accepted by others.	1 2 3 4 5
Ethical Code – the need to feel that what you are doing is right and that you are a good person.	1 2 3 4 5
Dependence – the need to be directed by others to avoid feeling all alone in your responsibilities.	1 2 3 4 5
Creativity and Challenge – the need to meet new problems and to produce new and original work.	1 2 3 4 5
Social Welfare – the need to help others or do something that benefits others.	1 2 3 4 5
Independence – the need to direct your own behaviour and to have some control over what you do.	1 2 3 4 5

2. Rank the twelve reasons in order of importance to you using the scale:
1 – the most important; 2 – the next most important . . . 12 – the least important.

ALBERTA HUMAN RIGHTS COMMISSION

PROTECTING HUMAN RIGHTS

There are certain rights which we as a society consider so fundamental to human dignity that they deserve special protection under the law.

In Alberta these **human rights** are protected by the **Individual's Rights Protection Act (IRPA)**. The IRPA is Alberta's anti-discrimination legislation and it is administered by the **Alberta Human Rights Commission**.

INDIVIDUAL'S RIGHTS PROTECTION ACT

The Individual's Rights Protection Act (IRPA) was passed in 1972 by the Alberta Legislative Assembly and was amended in September 1980 and again in June 1985. The IRPA bestows on the Commission a mandate to educate the public about the provisions of the Act, the operations of the Commission and human rights issues in general, and to investigate complaints of alleged discrimination under the Act.

Discrimination

The Individual's Rights Protection Act is not designed to control prejudice - what people think - but to prohibit discrimination - what people do.

Discrimination may be defined as ... "being treated differently because you belong to a particular group or class of people, rather than being judged on your own merit."

The IRPA protects Albertans from acts of discrimination in employment, tenancy, and public accommodation and services, as well as in signs and notices published or displayed before the public, and in applications and advertisements regarding employment. It is a contravention of the IRPA to discriminate against an individual on the basis of race, religious beliefs, colour, sex, physical disability, ancestry and place of origin. In employment only, age (18 years and over), marital status, equal pay and pregnancy (when employed) are also protected grounds. Sexual harassment is considered a form of sex discrimination and is prohibited by the Act.

Aim of the Act

The aim of the Act is to give everyone in Alberta an equal opportunity, free from discrimination, to earn a living, have a place to live and to enjoy public services and accommodations. The IRPA is not a criminal code. The Commission does not look for "guilt" or "innocence". It does not have the power to order an employer, landlord or service provider to pay a fine or agree to a settlement.

Complaints

When the Commission receives a complaint alleging an act of discrimination, human rights officers first determine whether the Commission has jurisdiction and whether there are "reasonable grounds" to believe discrimination has occurred.

When it appears that the IRPA has been contravened, the complainant will be requested to sign a complaint form before the Commission can investigate. The respondent is notified of the complaint before any further action is taken.

Third party complaints may also be made under some circumstances.

Retaliation

The IRPA provides protection against retaliation for any individual making a complaint. The Act specifically prohibits reprisals (intimidation, coercion, dismissal, eviction and/or threat of penalty) against any person who has made a complaint or co-operated in an investigation under the Act.

Investigation

Commission investigations are objective, impartial and confidential. Respondents and complainants are given an equal opportunity to present their respective positions.

The Commission will dismiss a complaint at any stage of the proceedings, if, in its opinion, the complaint is without merit.

Settlement

If it is determined that the IRPA has been contravened, Commission officers attempt to negotiate a settlement. Because each case is unique, negotiated settlements can vary from letters of apology to compensation for lost wages.

Neither Commission staff nor the Commission can order either of the parties involved to accept a settlement. The IRPA gives the Commission the responsibility of attempting to negotiate settlements which lead to the satisfactory resolution of complaints. Where discrimination has occurred against an individual, the Commission attempts to negotiate a remedy that will, to the greatest extent possible, restore that individual to the same circumstances that existed before the act of discrimination took place.

Board of Inquiry

When a settlement cannot be reached, the Commission may direct the Minister of Labour to appoint a board of inquiry to hear the case. The board of inquiry is an independent, quasi-judicial body. Its decisions are binding but may be appealed to the courts.

Education

In addition to dealing with complaints under the Act, the Alberta Human Rights Commission is also responsible for educating the public about the provisions of the Act and about human rights issues in general. With this objective in mind, the Commission is heavily involved in developing and conducting workshops and information sessions for schools, businesses, unions and special interest groups, as well as producing a variety of information material for the public.

Education officers, employed by the Commission, conduct workshops and seminars, make public presentations, and develop resource and curriculum material aimed at raising public awareness of human rights principles and legislation.

Workshops cover a variety of topics including equal pay, mandatory retirement, pregnancy, appearance and dress codes, physical disabilities and sexual harassment.

Workshops, seminars and public presentations can be tailored to meet individual needs and are available free of charge.

The Commission believes it is through education that increased public understanding and acceptance will be attained.

ALBERTA HUMAN RIGHTS COMMISSION

The Alberta Human Rights Commission was established in 1973. It is an autonomous body composed of seven members who are appointed by the Lieutenant-Governor in Council to represent the public at large. The Commission is responsible for the administration of the Individual's Rights Protection Act and reports to the Minister of Labour.

The Commission employs a full-time staff and has its head office in Edmonton. There are two regional offices, one in Calgary serving the city of Red Deer and area south, and one in Edmonton, serving the area north of Red Deer. It is through these offices that the majority of contacts between the public and the Commission staff occurs.

The Commission meets every month, alternating between Calgary and Edmonton. On occasion meetings are held in other parts of the province. A portion of some meetings is opened to the public and the media, and where appropriate the Commission will release details of settled cases. These open public meetings enable groups and individuals to discuss matters of concern or mutual interest. Open meetings are announced in advance and members of the public are welcome to attend. Confidential sessions are used to formulate policies, review complaints and discuss issues affecting the Act.

The Commission welcomes presentations from groups and individuals on matters relative to human rights policies and legislation.

HUMAN RIGHTS AND YOU

The number of complaints handled by the Alberta Human Rights Commission suggests a growth in Alberta's awareness of the devastating effects of human rights abuses. It reflects a new willingness on the part of Albertans to speak out against discrimination in all its forms in a way they might not have had the confidence to do two decades ago.

The sound reasoning behind the IRPA will benefit Albertans only to the extent that the Commission can help them understand what the legislation is trying to accomplish. Teaching people how to use the law to help themselves is part of the Commission's mandate. Legislation cannot automatically eradicate discrimination. However, it can create the kind of awareness that is the key to removing barriers created by discrimination.

Albertans are turning more and more to the Human Rights Commission as a resource against discrimination. If you believe you have been discriminated against and cannot resolve the situation informally, give us a call in confidence and talk it over.

Alberta Human Rights Commission

801 Kensington Place
10011 - 109 Street
Edmonton, Alberta
T5J 3S8
(403) 427-7661

Dorchester Square
1333-8 Street S W
Calgary, Alberta
T2R 1M6
(403) 297-6571

Outside Edmonton and Calgary consult your local AGT directory under Government of Alberta for toll-free access.

PROTECTED AREAS UNDER THE INDIVIDUAL'S RIGHTS PROTECTION ACT (IRPA)

It is a contravention of the IRPA to discriminate against individuals in the following protected areas:

Employment

No employer or person acting on behalf of any employer can deny employment, discriminate in the terms and conditions of employment, or refuse to continue to employ any person because of the race, religious beliefs, colour, sex, physical disability, marital status, age, ancestry or place of origin of that person.

Note: These provisions do not apply to individuals working in a private home, or working on a farm and living in the private home of the farmer.

Job Advertisements, Applications and Interviews

The IRPA prohibits the use or circulation of any form of application for employment, or the publishing of any advertisement in connection with employment or prospective employment that expresses either directly or indirectly any limitation, specification or preference as to the race, religious beliefs, colour, sex, physical disability, age, ancestry or place of origin of any person; or that requires an applicant to give any information, either written or oral, concerning their race, religious beliefs, colour, sex, physical disability, ancestry or place of origin.

Membership in Trade Unions, Employers' Organizations or Occupational Associations

The IRPA prohibits trade unions, employers' organizations or occupational associations from excluding any person from membership, expelling or suspending any member, or discriminating against any person or member because of the race, religious beliefs, colour, sex, physical disability, marital status, age, ancestry or place of origin of that person or member.

Tenancy

Under the Act no individual can deny to any person or class of persons the right to occupy as a tenant any commercial unit or self-contained dwelling unit that is advertised or otherwise represented as being available for occupancy by a tenant; or discriminate against any person or class of persons in the terms or conditions of tenancy because of the race, religious beliefs, colour, sex, physical disability, ancestry or place of origin of that person or class of persons.

Public Services and Accommodation

Under the Act no individual can deny to, or discriminate against, any person or class of persons with respect to any accommodation, services or facilities customarily available to the public, because of the race, religious beliefs, colour, sex, physical disability, ancestry or place of origin of that person or class of persons.

Signs and Notices

The IRPA prohibits the publishing or displaying before the public of any notice, sign, symbol or emblem that indicates discrimination or an intention to discriminate against any person or class of persons for any purpose because of the race, religious beliefs, colour, sex, physical disability, age, ancestry or place of origin of that person or class of persons.

Note: The provisions of this section of the Act are not intended to interfere with the free expression of opinion on any subject, and do not apply to non-profit organizations, private clubs or facilities customarily used by one sex.

If you require more information on "Protected Areas", please call the Commission at:

427-7661 (Edmonton)	or	297-6571 (Calgary)

Outside Edmonton and Calgary consult your local AGT directory under Government of Alberta for toll-free access.

YOUTH

The Individual's Rights Protection Act (IRPA) prohibits discrimination because of race, religious beliefs, colour, sex, physical disability, ancestry and place of origin in the areas of:

- employment, job advertising, job applications, and interviews
- tenancy
- services customarily available to the public
- signs and notices published or displayed before the public
- membership in trade unions, employers' organizations or occupational associations.

Age (18 years and over), marital status, equal pay for similar work, and pregnancy (when employed) are also protected grounds but only in the area of employment.

On the Job

Protection in employment on the basis of age is limited to those 18 years and older. That is, the employer has the right to choose not to hire a person younger than 18 because of his or her age. The employer may not, however, deny employment to any person because of race, religious beliefs or any of the other grounds protected under the IRPA. Children and youth enjoy the same protection on these grounds as adults do.

At School

School is considered a service customarily available to the public and therefore comes within the jurisdiction of the IRPA. No student may be treated differently at school because of race, religious beliefs, colour, sex, physical disability, ancestry or place of origin.

Sexual harassment is considered discrimination on the basis of sex. If someone at school, an employer, service provider or landlord, is making unwanted sexual advances, unwanted requests for sexual favours, or subjecting you to unwanted verbal or physical conduct of a sexual nature, you can contact the Alberta Human Rights Commission for help.

Services

Sometimes people operating stores or restaurants, or providing other services, may make it a policy to bar students or youth. They have the right to refuse service to anyone as long as the refusal is based on reasons other than race, religious beliefs, colour, sex, physical disability, ancestry or place of origin.

The automobile insurance industry is a special case. Young men are charged more for auto insurance than are young women. Insurance rates are based on a number of criteria, including sex and age. In Alberta, the insurance industry has been granted a temporary exemption from the IRPA and is in the process of reviewing the way in which insurance rates are determined.

NOTE: Any complaint filed under the IRPA must be lodged with the Alberta Human Rights Commission within six months of the alleged incident. Failure to do so results in the complaint being out of time and the Commission is then no longer empowered to investigate.

If you require more information on "Youth" please call the Commission at:

427-7661 (Edmonton) or 297-6571 (Calgary)

Outside Edmonton and Calgary consult your local AGT directory under Government of Alberta for toll-free access.

APPEARANCE/DRESS CODES

Employers have the right to establish the appearance, grooming and dress standards they believe necessary for the safe or effective conduct of a business. An employer may prescribe different standards of dress for male and female employees.

The Alberta Human Rights Commission recommends that employers review their practices to ensure their standards are not discriminatory, that is:

- Appearance or grooming standards or dress codes are reasonable, not arbitrary, and in keeping with societal mores.
- Standards or codes are not used as a pretext for the exclusion from employment or adverse treatment in employment of any person on any grounds of discrimination as set out in the Individual's Rights Protection Act.
- Codes and standards are limited to characteristics that the person affected can change.

Appearance and Grooming

Employers may establish reasonable appearance and grooming standards to meet such criteria as esthetics, health and safety, unless such standards would interfere with an employee's religious practice.

NOTE: Any complaint filed under the IRPA must be lodged with the Alberta Human Rights Commission within six months of the alleged incident. Failure to do so results in the complaint being out of time and the Commission is then no longer empowered to investigate.

If you require more information on "Appearance/Dress Codes", please call the Commission at:

427-7661 (Edmonton)	or	297-6571 (Calgary)

Outside Edmonton and Calgary consult your local AGT directory under Government of Alberta for toll-free access.

PHYSICAL DISABILITY

Physical disability is a protected ground under the Individual's Rights Protection Act (IRPA) in the areas of employment, public services, accommodation and tenancy. Any individual who has grounds to believe he or she has been discriminated against because of a physical disability may file a complaint with the Alberta Human Rights Commission.

Definition

Physical disability is defined as "...any degree of physical disability, infirmity, malformation or disfigurement that is caused by bodily injury, birth defect or illness and, without limiting the generality of the foregoing, includes epilepsy, paralysis, amputation, lack of physical co-ordination, blindness or visual impediment, deafness or hearing impediment, muteness or speech impediment, and physical reliance on a guide dog, wheelchair or other remedial appliance or device."

A person with a physical disability should be accommodated, where possible, within the environment enjoyed by persons without a physical disability. Each situation is unique and it is necessary to look at the circumstances in each case to determine whether an individual can be reasonably accommodated. This applies whether a person is disabled at the time of hiring, or whether he or she develops a disability after working in a position for some time.

On the Job

Employers are expected to make reasonable efforts to provide access to the workplace and washroom facilities for physically disabled employees. As well as making such physical accommodations, it is often possible for an employer to arrange the workload so that duties within a job description which the physically disabled person cannot perform can be handled by other employees.

For example, a typist in a wheelchair might not be able to file. Another typist could arrange to do the filing for both, while the disabled person compensates by doing a larger portion of the typing. It would be up to the employer in each case to decide whether this type of arrangement is feasible.

Health and Safety

It is not expected that an employer should hire or continue to employ a person whose physical disability increases the probability of health or safety hazards to themselves, other employees and/or the public. It is, however, up to the employer to demonstrate that the individual's impairment endangers the individual, other employees and/or the public.

For example, an individual who is subject to epileptic seizures should not be employed to work on a scaffold. If that person suffered a seizure, his or her life may be endangered as well as the lives of would-be rescuers; also, there is the danger of that person dropping tools and injuring people walking below.

Hiring the Disabled

Applications and job interviews must be handled carefully. Questions about medical conditions, injuries or diseases, kinds of medication taken or workers' compensation claims are not permitted. Any physical requirements of the job, such as heavy lifting, for example, should be clearly outlined in the job description. If a potential employee has the experience and skills for the job, and is the top candidate, he or she should be offered the job contingent on passing a job-related medical examination. A company doctor or any medical practitioner can assess whether the applicant is physically able to perform the tasks outlined in the job description.

The Employer's Responsibilities

Employers concerned about their responsibilities in accommodating physically disabled persons, can call on the Alberta Human Rights Commission for advice. The Commission may also be able to identify other resources which may be able to assist, such as the Association for the Disabled or the Alberta government's Health and Safety Division.

NOTE: Any complaint filed under the IRPA must be lodged with the Alberta Human Rights Commission within six months of the alleged incident. Failure to do so results in the complaint being out of time and the Commission is then no longer empowered to investigate.

For more information on "Physical Disability", contact the Commission at:

427-7661 (Edmonton)	or	297-6571 (Calgary)

Outside Edmonton and Calgary consult your local AGT directory under Government of Alberta for toll-free access.

EQUAL PAY FOR SIMILAR WORK

The Individual's Rights Protection Act (IRPA) requires that employers not discriminate on the basis of sex. Specifically, the Act ensures that men and women working in the same establishment and performing "similar or substantially similar work" must be paid at the same rate. Pay differentials which do exist must be based on factors other than sex.

Two jobs need not be identical, but a high degree of similarity in skill, effort, responsibility and working conditions must be demonstrated. For example, orderlies and nursing aides in the same hospital perform the same work, although in the past the former were men and the latter women.

Job descriptions or classifications should reflect the total character of a job. Different job descriptions for two jobs which are similar or substantially similar will not justify a pay differential between the two if one is held by a man and the other by a woman.

It is also illegal for employers to reduce a rate of pay in order to equalize the rates of pay between males and females. However, employers are entitled to pay employees a rate appropriate to additional related experience, education and merit. Merit increments are permitted, as long as this practice is objective and consistent.

The employer is ultimately responsible for ensuring non-discriminatory employment practices and must ensure that employees are hired, promoted, paid and dismissed according to objective guidelines applied equally to men and women.

NOTE: Any complaint filed under the IRPA must be lodged with the Alberta Human Rights Commission within six months of the alleged incident. Failure to do so results in the complaint being out of time and the Commission is then no longer empowered to investigate.

COMPLAINANT'S GUIDE

The Individual's Rights Protection Act (IRPA) prohibits discrimination in the areas of:

- employment, job advertising, job applications and interviews
- tenancy
- services customarily available to the public
- signs and notices published or displayed before the public
- membership in trade unions, employers' organizations or occupational associations

because of race, religious beliefs, colour, sex (including sexual harassment), physical disability, ancestry and place of origin.

Age (18 years and over), marital status, equal pay, and pregnancy (when employed), are also protected grounds in the area of employment only.

Filing a Complaint

If you believe you have been discriminated against, you can call the offices of the Alberta Human Rights Commission for help. If you are aware of acts or practices of discrimination against others, you might be able to file a third party complaint on behalf of another individual.

Initially, your complaint will be reviewed by a human rights officer to determine if the Commission has jurisdiction and whether there appears to be reasonable grounds for accepting the complaint.

In certain cases the complaint may be handled informally. An investigating officer might contact the respondent to attempt to resolve the complaint, without the need for a normal complaint being filed and an investigation completed. If a formal complaint is accepted, an investigation will take place.

During the investigation and settlement process it is important to keep the Commission informed of any change in your home address, telephone number or place of employment, or that of witnesses.

Investigation

When you sign a formal complaint your case will be assigned to a human rights officer, trained to investigate impartially and objectively. The officer gathers facts by interviewing witnesses and obtaining records and other relevant documentation.

At any point during the investigation, if it is found that your complaint cannot be substantiated, the human rights officer may recommend that the complaint be dismissed. However, you have the right to appeal a dismissal by writing to the chairman of the Alberta Human Rights Commission.

If it is determined that there is sufficient evidence to substantiate your complaint, an attempt will be made to negotiate a settlement between you and the respondent.

Resolution of the complaint is possible at any point during the course of the investigation.

Settlement

In addition to seeking a remedy for you, the Commission is also concerned about protecting the public from further discriminatory practices.

Settlements can range from an apology by the respondent, to a commitment not to discriminate in the future. In some cases, financial compensation for lost wages or expenses resulting from the act of discrimination may be part of the settlement.

If you refuse to co-operate in an effort to effect a settlement which the Commission feels is reasonable, your complaint may be dismissed.

Board of Inquiry

If your complaint is substantiated but the respondent does not agree to settlement, the Commission can direct the Minister of Labour to appoint a board of inquiry to investigate the complaint.

At a board of inquiry, testimony is given under oath and becomes a matter of public record. Board decisions are binding and enforceable, but can be appealed to the Court of Queen's Bench by either party.

Retaliation

If the respondent retaliates against you because you have filed a complaint, you are protected under the Act. The Commission can pursue a retaliation complaint regardless of the validity of the original complaint. Anyone who offers evidence or information in connection with a complaint is also protected from retaliation.

NOTE: Any complaint filed under the IRPA must be lodged with the Alberta Human Rights Commission within six months of the alleged incident. Failure to do so results in the complaint being out of time and the Commission is then no longer empowered to investigate.

If you require more information on the "Complainant's Guide", please call the Commission at:

427-7661 (Edmonton)	or	297-6571 (Calgary)

Outside Edmonton and Calgary consult your local AGT directory under Government of Alberta for toll-free access.

PROJECT/TASK PLAN

Name of Project/Task ______________________________

Project/Task Force ______________________________

1. Equipment, tools and supplies required

Sketch or photograph of product to be produced

2. Procedures
   (Note: Include details of special safety precautions at each step.)

3. Evaluation
   (Indicate how you intend to judge the quality of the finished product.)

(Note: Before attempting to carry out a project/task plan, it must be approved by the teacher or supervisor.)

Student(s) ______________________________ Teacher/Supervisor ____________________

POSITIVE AND NEGATIVE FEEDBACK: A RECORD OF OBSERVATIONS

- Name of Workplace: Date:
- Period of Observation From: To:
- Type of Job Shadowed:
- Description of tasks performed by the worker:

POSITIVE FEEDBACK	NEGATIVE FEEDBACK

- What effect did positive feedback tend to have on the worker?

- What effect did negative feedback tend to have on the worker?

- Which type of feedback would you prefer to receive? Why?

TIME GRID

Each time you are assigned a task, record the amount of time it took you to complete it. Compare the time you took to complete a task early in the course with the time taken to complete a similar task later in the course.

Course ____________		Time Taken to Complete Task (Hours, quarter, half and three-quarter hours)	Hrs./Mins.
Date	Task	0 1 2 3 4 5 6 7 8 9 10 11 12	
e.g., Jan. 5	Take inventory	█████████	5.5 hrs.

TIME CARD

TIME CARD

EMPLOYEE:

Social Insurance Number:

Week Ending:

MORNING		AFTERNOON		EVENING		HOURS
IN	OUT	IN	OUT	IN	OUT	

	HOURS	RATE	EARNINGS	
REGULAR				
OVERTIME				
TOTALS				

INTERVIEW GUIDE
THE IMPORTANCE OF TIME IN THE WORKPLACE

Course: ______________________________

Occupation of Person Interviewed: ____________________ Date of Interview: ________

1. Is the effective use of time important in your work?

____

____

2. In which ways is time important in your work?

____

____

3. Is any part of your work seasonal? Please describe the seasonal parts of your work (e.g., equipment maintenance, seeding, harvesting, seasonal sales).

____

____

____

4. What would happen if you:

   a. started a seasonal job late?

   ____

   ____

   b. failed to complete a job in the estimated time?

   ____

   ____

5. How are you paid:
   - hourly? ______________
   - weekly? ______________
   - monthly? ______________
   - commission? ______________

6. Which is more important (to the employer, or to you if self-employed):

   a. the number of hours worked?
   b. the number of products produced/service provided?
   c. a combination of (a) and (b)?

7. If you had more time, would you do anything differently in your work? ________________

____

____

TYPES OF SERVICE

Course: ______________________________ Student's Name: ____________________

Community Partner Observed: ________________________ Date: __________________

TYPE OF SERVICE OFFERED		IMPRESSIONS (Was the service good or bad? In what way?)
Personal	Procedural	

WORK STANDARDS OBSERVATION CHART

Course: ______________________ Name: ______________________

Business/Industry Observed: ______________________ Date: ______________________

WORK STANDARDS	EXAMPLES OBSERVED
1. QUALITY • Product quality • Process quality	
2. SAFETY • Equipment, tools and supply usage • Storage and handling	
3. SANITATION • Personal hygiene • Public hygiene	

Based on your observations, answer the following questions:

a. Would you like to work in this workplace? Why?

b. Do the present employees appear to enjoy their work? How can you tell?

c. If you were the boss, what changes would you make to the work standards? How would you go about making these changes?

3. COMMUNICATION SKILLS

> "Very simply, communication is a message sent and a message received; ideally these two messages would be identical, but seldom are."[1]

Maintaining a good communication system is important in all occupations. Any breakdown in communication can have implications on a worker's ability to do a job and on the company's ability to reach its objectives. If directions are not fully or clearly given, workers may not understand the exact procedures that must be followed or be aware of the specific materials that should be used. In order for work to be done correctly, workers need to seek clarification if they have not understood or are unsure about certain procedures or methods in their work.

In small businesses where the owner/manager runs all aspects of the business, communication is usually informal and mainly by word of mouth. The employees are given their assignments by the owner and report back when the work is done. As companies get bigger and develop separate departments, more information is conveyed in writing. Written communication enables employees and employers to:

- re-read instructions/information
- read the information and/or follow the instructions at a convenient time
- share information between a number of people in different locations
- keep a record of information and instructions given and received.

For a company to work effectively, communication, both verbal and non-verbal, should:

- flow in all directions
- be clearly understood by both the sender and the receiver
- be acted upon or responded to as quickly as possible.

The development of effective and appropriate communication skills is an integral part of each course within the Integrated Occupational Program.

TEACHERS OF STUDENTS IN OCCUPATIONAL COURSES SHOULD INTEGRATE THEIR INSTRUCTIONAL PLANNING WITH TEACHERS OF ENGLISH, TEACHER LIBRARIANS, AND COMMUNITY LIBRARIANS.

The concepts, related skills and attitudes developed in this unit include:

1. Recognizes appropriate/inappropriate forms of verbal communication
2. Recognizes appropriate/inappropriate forms of non-verbal communication
3. Communicates effectively with peers, teachers and others
4. Communicates effectively by telephone.

RESOURCES

STUDENT RESOURCE

- *Working*: *Today and Tomorrow* (Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

Correlation of Learning Objectives with Student Resource

Concepts, Skills and Attitudes	*Working: Today and Tomorrow*
3. Communication Skills	Chapter 10 "Getting Along with Others"

TEACHER RESOURCES

- Resource 1, "The Communication Tool Kit", Alberta Agriculture.
- Language Arts, Career and Life Management, Drama, and other teachers.
- Community partners.

---

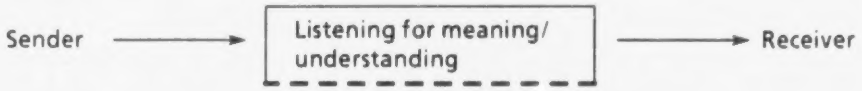
1. For permission to reprint copyrighted material, grateful acknowledgement is made to Alberta Agriculture for the excerpts from "The Communication Tool Kit", page 4.

A. VERBAL COMMUNICATION

All forms of communication involve a sender and a receiver. For communication to be effective the sender's message must be heard and understood by those receiving the communication.

Effective verbal communication involves:
- speaking clearly and with sufficient volume
- using words correctly (see Suggested Teaching Strategies, "Crossword Puzzle")
- listening carefully
- understanding what has been said.

Communication may be represented by the diagram below:



For effective communication to occur, the receiver should be able to restate both the words and the intent of the sender's message. In this context, the ability of the receiver to develop good listening skills is of utmost importance. (See Suggested Teaching Strategies, "Caring".)

Problems may occur when the receiver hears the words but does not understand their meaning.

Each occupation has its own "jargon" – a community of commonly understood words. The "jargon" used in one occupation may not always be understood in the same way in other occupations; e.g.,

a.	Palette	–	Crafts and Arts	–	Board on which paints are mixed
	Palate	–	Child and Health Care	–	Roof of the mouth
	Pallet	–	Warehouse Services	–	A wooden support for a cargo load
b.	T.P.I.	–	Crafts and Arts	–	Threads per inch of a fastener
	T.P.I.	–	Building Services	–	Teeth per inch of a saw blade
c.	Pockets	–	Natural Resource Services	–	Collections of underground oil deposits
	Pockets	–	Fashion and Fabric Services	–	A piece of fabric attached to the fabric forming a storage or carrying container
	Pockets	–	Construction Services	–	A recess that holds a "pocket" door.

Suggested Activities/Community Partnerships

1. Brainstorm to review the various forms by which a person may communicate verbally with others (e.g., face-to-face, telephone, intercom, P.A. system).

2. Read Resource 31, "Types of Communication", (see Suggested Teaching Strategies, "SQR3"). Discuss:

   a. Why is verbal communication important in the home, the school and in the workplace?

b. Are there differences between the words you would use in the workplace and those you would use in your home? List examples of both.

c. Why is listening important to effective communication?

d. What is meant by the term "reflective listening"?

3. Brainstorm to identify examples of problems experienced in sending and/or receiving "mixed messages" or "mixed meanings" in activities; e.g.,
    - receptionist taking appointments
    - salesperson presenting information about a product
    - mechanic explaining to a customer what's wrong with a car.

4. a. Visit community partners and listen to the communication that occurs among employees and between an employee and a customer. Is there a difference in the words, expression and voice tones used in the two situations? Describe the difference.

    b. Ask community partners to recount their most embarrassing miscommunication experience.

5. Role play various cause-related situations to demonstrate the difference between appropriate and inappropriate forms of verbal communication.

B. NON-VERBAL COMMUNICATION

Non-verbal communication accounts for 70 percent of the meaning we give to each piece of information we receive. Reading, writing, playing an instrument are examples of some forms of non-verbal communication. However, the term "non-verbal communication" is most commonly used to describe behaviours that, together, are called "body language" (e.g., appearance, expression, body position, proximity of sender to receiver). Both the sending and the receiving of information are affected by body language. Examples of the use of body language include:

a. A student asks, "May I leave class early today?" The teacher's response may be in the form of:
   - "yes" or "no" – verbal communication
   - a nod – non-verbal communication
   - ignoring the question – non-verbal communication
   - a look of disapproval – non-verbal communication.

   Even the verbal response of "yes" or "no" may communicate a non-verbal message to the student as he or she listens to the response to the question and looks for body language clues as to whether the teacher's "no" really means "NO!".

b. A student with dirty hands goes for a job interview in a restaurant.

   Before the student says a single word, the employer has formed an impression about the student by looking at his/her appearance – part of the body language communication process.

Student Activities/Community Partnerships

1. Brainstorm to review the various ways in which people communicate non-verbally.

2. Role play examples of non-verbal communications. Focus on the meaning of the non-verbal message communicated when you change:
   - facial expressions (e.g., looking eager/bored, miserable/pleased)
   - body posture (e.g., slouch/stand up straight)
   - body position (e.g., lean forward/lean backward while seated)
   - appearances (e.g., comb your hair/look untidy, wear freshly laundered clothes/wear soiled clothing)
   - time management (e.g., arrive early/just in time/late for an interview)
   - task management (e.g., submit a badly/clearly written application form; submit a clean/stained writing assignment).

3. Invite community partners (e.g., school counsellors, an employer, a personnel manager from a local company, a representative from Alberta Career Development and Employment) to discuss the importance of communication skills, especially non-verbal communication skills in the job search, and job retention processes.

4. People from other cultures may respond differently to various forms of non-verbal communication.

   a. Discuss with classmates and community partners the acceptable and non-acceptable forms of non-verbal communication when relating to people from a culture other than one's own.

   b. Role play appropriate forms of non-verbal communication with people from different cultures.

C. EFFECTIVE COMMUNICATION

> "Effective communication narrows the gap between the message that is sent and the message that is actually received by another person."[1]

Effective communication can involve sending and receiving any one or a combination of the following:

- facts
- feelings
- thoughts
- impressions
- sensations
- needs
- wishes

Effective communication does not just happen. It is learned through practice

Forms of communication that may be effective in one setting may be less effective or totally ineffective in another setting (e.g., verbal communications may not be effective in a workplace where heavy equipment is being operated. Signs, symbols and other non-verbal forms of communication may be more effective).

To improve both verbal and non-verbal communication skills, students should be encouraged to:

a. Ask questions when they have a need for:
   - further information
   - feedback
   - more detail
   - examples
   - clarification.

b. Follow verbal and non-verbal instructions. The following strategies are suggested to assist students to become more effective communicators:
   - post rules, instructions and critical procedures on bulletin boards to serve as an external and continuous memory support.
   - promote an atmosphere that is supportive of the student asking and responding to questions from the teacher or peers.
   - use questioning strategies that probe for students' understanding of instructions and the ability to transfer instructions into sequenced action
   - include the assessment of communication in evaluative strategies.

---

1. For permission to reprint copyrighted material, grateful acknowledgement is made to Alberta Agriculture for the excerpts from "The Communication Tool Kit", page 4.

Suggested Activities/Community Partnerships

1. a. Select a partner and construct and present course/job/task-related sentences beginning with the following phrases to your partner:
    - State in your own words . . .
        - What does it mean to. . . ?
        - What will happen if . . . ?
        - What is the next step?

   b. Respond to similar questions posed by your partner.

2. Design a project. Outline the procedure you intend to follow and present the project design and procedure to the rest of the class. Wherever possible, use visual effects (graphs, flow charts, models) to ensure greater understanding by classmates of what you intend to do and how you intend to do it. (Note: A community partner may be asked to act as your mentor in this and future activities.)

3. Brainstorm to review the various forms of non-verbal communication used to communicate information in workplaces (e.g., signs, symbols, sounds).

4. a. Select two classmates and, working as a group, select and discuss a problem or project about which your group has some strong ideas. Have one member from your group make a presentation (verbal and non-verbal) to the rest of the class describing:
    - the problem/project
    - the plan
    - the suggested solution.

   b. Working as a group, respond to questions posed by classmates.

   c. Summarize the feedback received to your group's presentation from classmates.

5. Role play situations involving verbal and non-verbal situations, e.g.,
    - taking orders in a restaurant
    - giving directions to a customer
    - dealing with a dissatisfied customer
    - face-to-face selling
    - handling a young child
    - nurturing an elderly person.

6. Visit two or more community business/industry operations and observe, record and interpret signs, symbols and other non-verbal communication devices in use. Use Resource 32, "Signs, Symbols and Other Non-Verbal Communications Used in the Workplace", to record your observations.

D. TELEPHONE COMMUNICATION

The telephone is one of the most important tools of communication in the home, the school, the community, and the workplace. People in business need to communicate regularly with customers, suppliers and other businesses.

Having access to a telephone is now considered so important that many people install telephones in their cars, and some people carry mobile-phones with them at all times.

Car-phones and mobile-phones are relatively expensive; therefore, many people rent "beepers" – a communication device that tells the user that someone is trying to make contact by telephone. At the sound of the "beep", the user goes to the nearest telephone to make contact with the caller.

Using the Business Telephone

The technology that enables the telephone caller and the person receiving the call to see one another is still very expensive and thus not in widespread use. When video-telephones become more widely available, both the caller and the receiver will probably be concerned with what they say and how they look to one another.

At this time, however, it is important that people who use the telephone for business purposes develop phonogenic skills – the ability to communicate pleasantly and positively with others over the telephone.

Basic phonogenic skills include:

- placing the telephone handset directly in line with the lips and about the width of two fingers from the mouthpiece
- speaking in a clear, evenly paced voice. Never shout into the mouthpiece
- being polite and considerate to the other person even though the other person may not always demonstrate phonogenic skills.

Initiating Outgoing Calls

A receptionist or other employee may be asked by an employer or a customer to make a business call on their behalf. The following practices will help to improve phonogenic skills.

a. When using a telephone with more than one line, observe the indicator lights. Be certain the line is free before you pick up the handset.

b. Pick up the handset and listen for a dial tone before dialing. If you accidentally pick up a line that is already in use, say "excuse me" and hang up immediately.

c. When the person being called answers the telephone, identify yourself – "Good morning, Ms. Smith, this is Michael Brown of the XYZ Company."

d. State the purpose of the call clearly and concisely; e.g., "Mr. Lock would like an appointment to see Ms. Marion today. Is this possible?"

e. If the call requires that a message be taken, use a message form to record the information clearly and accurately.

f. Be aware that in business time is money. When the business of the call is completed, end the call.

Recording Telephone Information

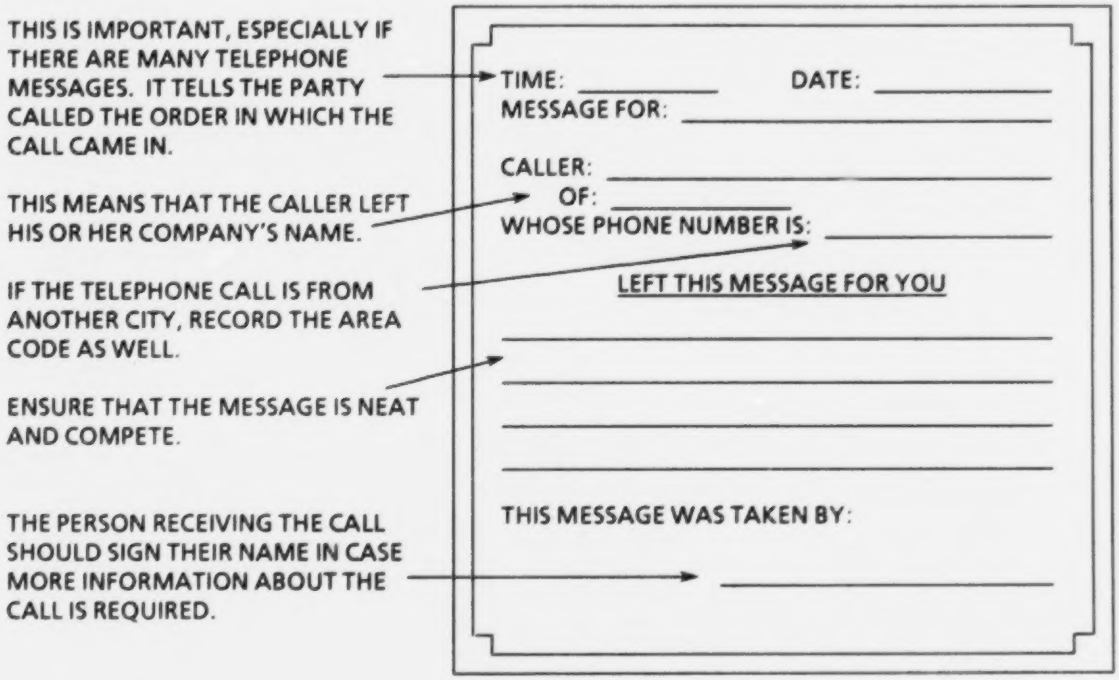
When taking a message over the telephone, a message pad should be used. In addition, the message receiver should:

a. write quickly and clearly

b. ask the caller to repeat any information that may have been missed

c. rewrite telephone messages for clarity and accuracy if necessary. Be careful to spell correctly and to give full and accurate information in the note. Check the telephone number against your first copy

d. be certain that the person called gets the telephone messages *immediately* he or she is available.



THIS IS IMPORTANT, ESPECIALLY IF THERE ARE MANY TELEPHONE MESSAGES. IT TELLS THE PARTY CALLED THE ORDER IN WHICH THE CALL CAME IN.

THIS MEANS THAT THE CALLER LEFT HIS OR HER COMPANY'S NAME.

IF THE TELEPHONE CALL IS FROM ANOTHER CITY, RECORD THE AREA CODE AS WELL.

ENSURE THAT THE MESSAGE IS NEAT AND COMPETE.

THE PERSON RECEIVING THE CALL SHOULD SIGN THEIR NAME IN CASE MORE INFORMATION ABOUT THE CALL IS REQUIRED.

TIME: __________ DATE: __________

MESSAGE FOR: __________

CALLER: __________

OF: __________

WHOSE PHONE NUMBER IS: __________

LEFT THIS MESSAGE FOR YOU

THIS MESSAGE WAS TAKEN BY:

Suggested Activities/Community Partnerships

1. Through your teacher or supervisor arrange with the school principal and the school secretary or receptionist to gain first-hand experience answering incoming calls to the school. (Resource 33, "Answering the School Telephone", provides guidelines to assist you in this task.)

2. a. Read Resource 34, "Putting a Caller on Hold", and Resource 35, "The Telephone: Situational Responses" and role play the procedures with a classmate.

   b. Make and use copies of Resource 36, "Telephone Message Forms", to record any messages you take.

c. Ask your partner to provide you with feedback on your phonogenic skills. Resource 37, "Evaluation of Phonogenic Skills" may be used to guide your partner's evaluation and feedback.

3. Initiate contacts with potential community partners by telephone. Keyboarded or handwritten follow-up letters may then be written and mailed.

4. Have students work in pairs and present a telephone scenario. Have the rest of the class provide feedback as to the attitude of both the "caller" and the "receiver". You may role play:
   - an impatient caller
   - an irritable receiver
   - an angry, dissatisfied customer
   - an emergency call to the fire, police or ambulance authority.

5. The need to use a business telephone correctly occurs in occupations other than those usually associated with office work. Brainstorm to identify the non-office occupations in which the ability to use a business telephone correctly might be a saleable skill.

6. Where possible, volunteer to answer the telephone and/or learn how to work a switchboard when involved in a community partnership activity. Ask the employer (and the receptionist, if present) to use Resource 37, "Evaluation of Phonogenic Abilities", to evaluate your ability to handle telephone calls and to take telephone messages.

TYPES OF COMMUNICATION

Just as you use a shovel for one purpose and a pitchfork for another, you need to learn which communication skills to use in the situation at hand. If the **other** person is upset, has information to convey, has needs to be met, has a problem, then you are the receiver and you use **reflective listening**. If **you** have the problem, the needs and the information, then use all the tools at your disposal for **accurate sending**. If you **both** have needs, particularly if they are in conflict, then bring your whole tool kit into play in **negotiation**.

If there is one problem that can be pinpointed as being most common, it is the inability of people to determine **"who has the problem?"** The second most common problem is defining "what is the problem?" The answers to those two questions are not always as obvious as we think they are.

1. Non-verbal

While words are very important in conveying information, in many communications the message comes from:

body posture and gestures:	70 percent
tone of voice:	20 percent
words:	10 percent

So be conscious of what you see (more will be said about that) and how you are expressing yourself. Do the elements match? Do his words match what you see and hear? Do your words match what he is seeing and hearing?

Practise – to heighten your awareness of the importance of physical aspects of communication:

- Have a partner choose a topic. Before starting the discussion, stand back to back with about six inches between you. Now, start the conversation. Pay attention to how you feel in this position and to any movements you make. Do you find yourselves craning to see each other?

- Now, continuing to talk, turn and face one another, but close your eyes. How does that feel? What do you notice about your reaction?

- Still continuing to talk, open your eyes and, facing each other, move to opposite sides of the room. What changes do you notice?

- Now, continuing to talk, find a comfortable position to finish the conversation. Many people will find themselves, at this point, seated near one another, in good eye contact. This is the "I'm listening" body posture. Remember this position.

2. Verbal

Words

Despite carrying only 10 percent of the message, words are vitally important. Many times our choice of words muddies up our messages. One of our most common habits is the use of generalities. If you use generalities, you will think in generalities, and relate that way.

Example: "I have had a rotten day." This statement leaves the speaker feeling frustrated and depressed, and the listener unenlightened. In fact, this was how the day actually went:

I got up a half hour late this morning, so the children had to rush to catch the bus without lunches. I ended up having to take the lunches to town. At least, I was able to eat with the kids. I did my shopping - groceries have gone up in price - and a bunch of errands. Supper was late and everyone was clamoring for attention.

As the speaker focusing on the details, would you feel the same about the day as before? As the listener, compare your initial reactions to the two messages. When you take time to look at the details, you realize there were both positive and negative aspects to the day.

Words can confuse, rather than clarify. We may choose words that:

1. have more than one meaning (husky, crunch, gay, even turkey - every page in the dictionary would yield examples)
2. are relative (big, small, cold, warm - compared to what)
3. announce an attitude rather than describe (antique or second-hand, character lines or wrinkles)
4. are overly broad (all, never)
5. make "motherhood" statements (liberty, equality, freedom).

Next time you hear someone making a speech, ask yourself what the person really means in terms of day-to-day action. The chances are 99 to 1 that you will not know.

Be specific. Some writers talk about "operational definitions". These are definitions that are so specific that you have no doubt about what is meant. A good example is a recipe. Be as specific as you can.

Practice - Each partner does this separately and then compares:

i. Make a list of five words that have at least two meanings.
ii. Make a list of five words that have only one very specific meaning. Does your partner agree with your meaning?

"Let's see, is it your turn or my turn to guess what size he wanted?"

---

1. For permission to use copyright material, grateful acknowledgement is made to Alberta Agriculture for permission to reprint this excerpt from The Communication Tool Kit.

SIGNS, SYMBOLS AND OTHER NON-VERBAL COMMUNICATION USED IN THE WORKPLACE

Course: ______________________ Name: ______________________

Visit two or more workplaces and identify the types of non-verbal communication (e.g., signs, symbols) and indicate their purpose. Include Workplace Hazardous Materials Information System (WHMIS) symbols.

Workplaces visited: ______________________ Date: ______________

TYPE OF COMMUNICATION (Draw a sketch of what you observe)	**PURPOSE** (Check ✓)				
	Safety	Sanitation	Storage	Hazardous Substance	Other (Specify)

(If more space is needed, use a plain sheet of paper and attach it to this sheet.)

ANSWERING THE SCHOOL TELEPHONE

When answering the school telephone, remember to:

a. Answer on the first ring if possible.
b. Say: "Good morning. Wilson High School. This is John Smith, a student speaking."
c. Listen carefully to what the other person is saying. Keep a note pad at hand to write the information on and then respond to the caller.

The caller may say something like this:
"Is the principal in?"

e. If the principal is taking calls, then you will say something like this:

"Yes. May I tell him who's calling, please?"
When the caller tells you his/her name, write it down, then say:
"Thank you. One moment please."
Then inform the principal of the caller's name and put the call through.

f. If your telephone system requires that you hang up your phone when the principal takes the call, then do so as soon as you know that the call has been taken.

g. If the principal is not available to accept an incoming call, then tell the caller:

"I'm sorry, Mr. Smith isn't available to take your call at the moment. May I have your name and number and he will call you back as soon as he is free."

NOTE: Substitute real names for the pretend ones above.

PUTTING A CALLER ON HOLD

If there are several telephone lines coming into a business telephone, many calls may come at the same time. Since only one call can be handled at a time, it will be necessary to ask other callers to wait until the first call has been answered. To do this, waiting callers must be put on "hold".

Different telephone systems have different ways of actually doing that. Encourage students to learn how to work different systems by practising on the school switchboard after school hours. Practice receiving in-coming calls and punching the correct buttons in the correct order.

The procedures below are commonly followed when a caller is put on hold:

1. You are speaking with Caller "A" when the second line rings.
   You say to Caller "A":

   > "I have another call coming in. Would you please hold for a moment and I'll get right back to you?"

2. Answer the second call just as if it were the only call being handled, and say . . .

   > "I have a call on another line. Would you mind holding for a moment, please? I will get right back to you."

   Allow time for Caller "B" to assent, then return to Caller "A" after you have placed the second caller on hold.

3. Complete your call with Caller "A" then immediately return to Caller "B".

4. Nobody likes to be put on hold for very long!
   If you cannot complete your business with Caller "A" within 30 seconds, you should not place Caller "B" on hold. Instead you should say to Caller "B":

   > "ABC Company, Miss Jones speaking. I am transferring your call. Please remain on the line."

   > or, if you cannot transfer the call and a hold would last more than 30 seconds, you should say:

   > "ABC Company, Miss Jones speaking. I'm on another line at the moment. May I have your name and telephone number and I will return your call in a few minutes, or would you prefer to hold?"

   Sometimes, Caller "B" may be willing to remain on hold for a longer time, if asked very politely to do so. If not, you must return the call as soon as possible. This practice will save callers valuable business time and earn your company their respect. Remember to write down the caller's name and the telephone number!

5. If you transfer Caller "B" to another department or receptionist, be certain that the call has been transferred and answered before returning to Caller "A". Don't lose people on the line.

THE TELEPHONE: SITUATIONAL RESPONSES

The following responses are frequently used in business telephone conversations.

SITUATION	RESPONSES
Called party busy – does not wish to be disturbed	Mr. .... is not available this afternoon. May I ask him to call you tomorrow?
Called party with a client	Mrs. .... is with a client. May I ask her to call when she is free?
Called party at a meeting until 3 p.m.	Miss .... is attending a meeting. May I ask her to call you when she is available?
Called party talking on another telephone line	Mr. .... is on another telephone line. May I ask him to call you?
Progress report	Mr. .... is still busy. May I take a message or may I help you?
Called party out for coffee	I expect Mrs. .... in about 20 minutes. May I ask her to call you?
Called party out for lunch	I expect Ms. .... about 2:00 p.m. May I ask her to call you?
Called party away from desk for a few minutes	Mr. .... is not in the office just now. May I take a message?
Called party out of town	Mr. .... is out of town until (date). Could someone else help you?
Called party not in yet	I do not expect Mr. .... until about 10:00 a.m. May I ask him to call you?
Called party left office for the afternoon	Mrs. .... will not be back this afternoon. Would you like her to call you tomorrow?

SITUATION	RESPONSES
Called party available to certain individuals only	I'll see if he is free. May I tell him who is calling please? Yes, he is free, I'll connect you Mr. .... or I'm sorry Mr. .... , Mr. .... is in a meeting just now. Could someone else help you?
Called party is ill	Ms. .... is not in the office today. May I ask her to call you?
Called party unable to take call immediately	Mr. .... will be with you in a moment. Do you mind waiting or should I have him call you?
Called party reached wrong extension	Our sales department handles that type of information. May I transfer you?
Calling someone to the telephone	If you will excuse me for a moment I'll see if Miss .... is in the office. Yes, she is here. I'll transfer your call.
Terminating a telephone call	Thank you for calling. Good bye.

TELEPHONE MESSAGE FORMS

TIME: DATE:
MESSAGE FOR:

CALLER:
OF:
WHOSE PHONE NUMBER IS:

LEFT THIS MESSAGE FOR YOU

THIS MESSAGE WAS TAKEN BY:

TIME: DATE:
MESSAGE FOR:

CALLER:
OF:
WHOSE PHONE NUMBER IS:

LEFT THIS MESSAGE FOR YOU

THIS MESSAGE WAS TAKEN BY:

TIME: DATE:
MESSAGE FOR:

CALLER:
OF:
WHOSE PHONE NUMBER IS:

LEFT THIS MESSAGE FOR YOU

THIS MESSAGE WAS TAKEN BY:

TIME: DATE:
MESSAGE FOR:

CALLER:
OF:
WHOSE PHONE NUMBER IS:

LEFT THIS MESSAGE FOR YOU

THIS MESSAGE WAS TAKEN BY:

EVALUATION OF PHONOGENIC ABILITIES

Student Name: ______________________ Date: ______________________

School/Workplace Situation: ____

VERBAL COMMUNICATION ABILITIES	Exc.	Very Good	Good	Fair	Poor
1. Clarity – Is each word understandable?					
2. Tone – Is there a "smile" in the voice?					
3. Volume – Can the other party hear the communication? – Is he or she deafened by the voice?					
4. Communication – Was the other party told who was speaking?					

NON-VERBAL COMMUNICATION ABILITIES

1. Pleasantness – Does the speaker seem pleased to be involved in the communication?					
2. Eagerness – Does the speaker seem bored with the job?					
3. Message taking – Are messages taken correctly?					
4. Handling multiple calls – Is the proper procedure followed?					

Areas in need of improvement:

____

____

____

____

____

4. READING SKILLS

Reading is one of the five components of literacy. The five components of literacy are:

- reading
- speaking
- listening
- writing
- viewing.

Each of the components of literacy are integrated learnings in all Integrated Occupational Program courses. The IOP occupational courses incorporate occupation-related reading tasks which are designed to:

- improve students' general reading ability
- improve students' functional literacy in one or more occupational cluster
- motivate students to improve their literacy skills by focusing on the concrete, functional use of reading, speaking, listening, writing and viewing in the world of work.

Teachers of students in IOP courses are encouraged to integrate their instructional planning with language arts teachers, teacher librarians and community librarians. Through cooperative planning they would:

- provide language arts teachers with materials they can use to add relevance to reading instruction in the classroom (vocabulary lists, types of instructions used in the courses, trade magazines, and so on)
- require students to engage in task-related readings
- encourage student use of libraries and other resource centres in the classroom, school and community
- encourage librarians to obtain related resources and share these with students
- have a visible and accessible in-class resource centre that includes trade magazines, reference journals, work manuals and related print materials.

The concepts, related skills and attitudes developed in this unit include:

1. Uses related occupation terms
2. Identifies related occupation literature
3. Obtains access to resources in community resource centres
4. Interprets and follows written instructions.

RESOURCES

STUDENT RESOURCE

- *Working*: *Today and Tomorrow (*Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

Correlation of Learning Objectives with Student Resource

Concepts, Skills and Attitudes	*Working: Today and Tomorrow*
4. Reading Skills	Chapter 4 Oral reading of other appropriate sections should be encouraged.

TEACHER RESOURCES

- Resource 38, "New Terms and Words"
- Resource 39, "List of Related Literature"
- Trade/business journals
- Service/shop manuals
- Catalogues
- Government pamphlets/brochures
- Student workbooks.

1. RELATED OCCUPATION TERMS

Review the use of spoken and written "jargon" and technological terms specific to occupations. (See Section 3 of this manual, "Communication Skills: A. Verbal Communication".)

Encourage students to use terminology appropriate to the task being performed and to maintain a record of "new" terms and words and their descriptions or definitions. See Resource 38, "New Terms and Words."

Suggested Activities/Community Partnerships

1. New equipment, tools and supply items are constantly being developed and used, and new words are being developed to describe the use of the new items -- the "jargon" of the occupation. Use Resource 38, "New Terms and Words", to record each term or word that is new to you, and define it.

2. Individually or as a member of a small group, create a poster or some other form of display for your work area that will help to remind you of key terms and words related to the course.

2. RELATED OCCUPATIONAL LITERATURE
3. COMMUNITY RESOURCE CENTRES

Students enrolled in each occupational course should be encouraged to access, read and/or view literature including:

- trade/business journals
- service/shop manuals
- catalogues
- video/audio tapes
- government pamphlets/booklets.

Each occupational lab should have a visible and accessible area where related literature is displayed. Students should be encouraged, as frequently as possible, to search for information in the resource area rather than be "given" answers to their questions.

In situations where an in-class resource centre is limited or not feasible:

- ensure that the school library has appropriate resources available (e.g., journals, catalogues, pamphlets)
- encourage students to become members of and use the community library services
- help students locate and gain access to other resource centres (e.g., government departments, labour union libraries).

Suggested Activities/Community Partnerships

1. Using the periodical indexes and other resources in the school or community library, identify and list literature (e.g., journals, books, videos). When listing journals, indicate how frequently they are published, their single copy cost, and, if available, the cost of a one-year subscription (use Resource 39, "List of Related Literature" to summarize your findings).
2. Select an article that interests you in a journal and:
   - read the article
   - summarize two or three major points in the article and present them to the class
   - answer questions on the topic you presented.
3. Invite community partners to share literature produced within their organizations (e.g., newsletters, product information articles, labour union information pamphlets).

4. FOLLOWING WRITTEN INSTRUCTIONS

Every occupation needs employees who are willing and able to follow both verbal and non-verbal instructions. Written instructions often provide a lasting reference to:

- what is to be done
- how it is to be done
- how the completed task will be evaluated.

Written instructions rather than verbal instructions may be used to ensure that:

- any number of employees get the same information
- the procedures for carrying out a task are followed exactly as written and described.
- there is a lasting record of the instructions.

Written instructions will be remembered more easily if they are part of a mnemonic device (see Suggested Teaching Strategies, "First Letter Mnemonic"). For example, a mnemonic to assist students in preparing to keyboard might be: ESCAPE

Eyes on copy
Sit up straight
Copy on right-hand side of keyboard
Appropriate supplies/materials close at hand
Place fingers on home row
Everything ready? Begin keyboarding.

The student workbooks developed for each occupational course, and the school handbook (if available) may be used to reinforce the importance of following written instructions; e.g.,

- following procedures outlined on the job sheets
- reading and reacting to the various student activities

- following school policies related to:
  - absences from school or from a community partnership placement
  - late arrivals
  - emergency situations
  - grant and loan applications
  - peers, teachers and others.

Student Activities/Community Partnerships

1. Discuss:
   - Must instructions always be followed? Why, or why not?
   - Are written instructions more likely to be followed than verbal instructions? Why, or why not?
   - In what form are instructions most often given in related occupations? Why?

2. a. Visit two workplaces and obtain samples of on-the-job instruction sheets.

   b. Share these instruction sheets with classmates.

   c. Discuss:
      - Are the instruction sheets clearly written?
      - Are illustrations included as part of the instructions?
      - Can the instructions be followed by members of the class? Why, or why not?

NEW TERMS AND WORDS

Course: ______________________ Name: ______________________

Each time you hear or see a term or word that is new to you, write it in the column on the left and, using a dictionary, a trade or business journal, or by asking your teacher, supervisor or a community partner, define or describe the term or word.

NEW TERM/WORD	DEFINITION/DESCRIPTION
e.g., technology	e.g., putting theory into practice

LIST OF RELATED LITERATURE

JOURNAL NAME	WHEN PUBLISHED	SINGLE COPY COST	ONE-YEAR SUBSCRIPTION

BOOK TITLE	PUBLISHER

OTHER LITERATURE	CAN BE OBTAINED FROM:

5. WRITING SKILLS

The ability to demonstrate basic writing skills is an essential and integrated component in all IOP courses. Writing is a transferable skill across occupational clusters and courses.

The student workbook developed for each occupational course includes opportunities for students to practise their writing skills. In addition, the suggested writing activities in this unit may be used, complemented and supplemented with other teacher-generated activities to enhance students' writing ability.

> Teachers of students in IOP courses are encouraged to integrate their instructional planning with teachers of English, teacher librarians and community partners. Through cooperative planning they would:
>
> - provide teachers of English with materials they can use to add relevance to writing instruction in the classroom (e.g., vocabulary lists, types of instructions used in the courses, trade magazines)
> - require students to engage in task-related writings.

The concepts, related skills and attitudes developed in this include:

1. Describing uses of writing skills in related occupations
2. Writing in complete sentences and paragraphs
3. Writing a letter of application
4. Writing an information letter
5. Writing a thank you letter
6. Completing a job application form.

Teachers of IOP courses are encouraged to consult with English 26 and Social Studies 26 teachers to obtain additional samples of writing activities (e.g., résumés, letters of inquiry, job application forms) and to provide integrated instruction of this important skill.

RESOURCES

STUDENT RESOURCE

- Student workbooks
- Community partners.
- *Working*: *Today and Tomorrow* (Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

Correlation of Learning Objectives with Student Resource

Concepts, Skills and Attitudes	*Working: Today and Tomorrow*
1. Reading Skills	Chapter 1
2. Writing a resume	Chapter 7
3. Writing a job description	Chapter 7
4. Submitting a job application form	Chapter 7

TEACHER RESOURCES

- Resource 40, "Sample Letter of Application"
- Resource 41, "Sample Letter of Inquiry"
- Resource 42, "Evaluation Sheet: Letters"
- Resource 43, "Parts of a Résumé"
- Resource 44, "Hints on Writing a Résumé"
- Resource 45,"Sample Résumé"
- Resource 46, "Evaluating a Résumé"
- Resource 47, "Sample Thank You Letter"
- Resource 48, "Guidelines for Completing a Job Application Form"
- Resource 49, "Sample Detailed Job Application Form"
- Resource 50, "Evaluation of a Job Application Form"
- Community partners.

1. USES OF WRITING
2. SENTENCES AND PARAGRAPHS

The ability to write legibly and in complete sentences and paragraphs enhances each student's chances to find, attain and retain employment. However, the amount and type of writing required on the job may vary among occupations.

Suggested Activities/Community Partnerships

1. Write a set of instructions that might help another person:

   a. get from the school to your part-time place of work

   b. search for a part-time job (include all parts of the process)

   c. keep a part-time job.

2. Written instructions are sometimes presented in the form of a flow chart.

    a. Select one of the sets of instructions developed in the previous question and present the instructions in the form of a flow chart.

    b. What are the advantages/disadvantages of using a flow chart to present instructions?

    c. In what other ways could similar instructions be presented? Which way is best? Why?

3. a. Invite community partners from related occupations to discuss the amount and type of writing they do in their jobs. Write a paragraph describing the use of writing on a particular job (see Suggested Teaching Strategies, "Descriptive Writing").

    b. Discuss: Is basic writing ability an essential requirement to:
    - get the job?
    - retain the job?
    - advancement?

3. APPLICATION LETTER
4. INFORMATION LETTER
5. THANK YOU LETTER
6. JOB APPLICATION FORM

Writing letters of application and inquiry is part of the job search process.

A letter of inquiry is a "prospecting" letter. A person looking for a job may send a letter of inquiry to a number of companies to find out if they are interested in someone with his or her qualifications.

Letters of inquiry have a number of uses:
- Application Letter – A letter sent to a company in response to an advertised job/position (see Resource 40, "Sample Letter of Application")
- Prospecting Letter – A letter sent to a number of companies to introduce yourself as a potential employee of the company (see Resource 41, "Sample Letter of Inquiry")
- Request for Information Letter – A letter sent to a manufacturer/supplier or employer to obtain catalogues and other similar information.

(Resource 42, "Evaluation Sheet: Letters" may be used by students to evaluate their own and other students' letters.)

Each of these types of letters of inquiry may be accompanied by a résumé. A résumé is a summary of your skills, training and experience. Its primary purpose is to get the employer interested in you as a potential employee.

A well written letter of inquiry and résumé will often:
- secure you an interview that may lead to an offer of employment
- obtain the information or material you have requested.

Thank You Letter – A well written letter of thanks will often ensure that you will be remembered by the person contacted.

Suggested Activities/Community Partnerships

1. a. Read the following job advertisement and write a letter of application for the position.

> Wanted part-time assistant able or willing to learn to operate a(an) _________ (e.g., cash register, or insert a skill).
>
> Must be trustworthy, able to work well with others, handle money and be able to work weekends. Send letter of application including résumé to:
>
> ABC Warehouse, 9988 Anytown, Alberta, T0R 4X4

b. A friend obtains the advertised job and tells you how much he/she enjoys working at the ABC Warehouse. Write a prospecting letter about the possibility of obtaining employment with that company. Use Resource 42, "Evaluation Sheet: Letters" to evaluate your letter.

c. Prepare a personal résumé. Use the following resources as a guide:

Resource 43, "Parts of a Résumé"
Resource 44, "Hints on Writing a Résumé
Resource 45, "Sample Résumé
Resource 46, "Evaluating a Résumé".

2. Write a letter of inquiry to a equipment supplier requesting a copy of their most recent catalogue. Use Resource 42, "Evaluation Sheet: Letters", to evaluate your letter.

3. Assume you have received the catalogue requested from the company in question 2. Write a thank you letter to the company (see Resource 47, "Sample Thank You Letter").

4. Write a letter of inquiry to three local businesses/industries asking them to send you a sample job application form. Fill out the application forms applying the guidelines given in the following resources:

Resource 48, "Guidelines for Completing a Job Application Form"
Resource 49, "Sample Detailed Job Application Form"
Resource 50, "Evaluation of a Job Application Form"

5. Discuss:

a. Why is it important to complete the "comments"section on a job application form?

b. What points might appropriately be written in the section headed "Comments" on a detailed job application form?

c. Why would an employer want to know about your hobbies, interests, sports and other social activities?

SAMPLE LETTER OF APPLICATION

(A letter of inquiry should be keyboarded and follow a format similar to the sample below.)

4567 - 10 Street
Anytown, AB
T8N 3X1

January 15, 1990

Ms. J. Smith, Personnel Manager
ABC Warehouse
9911 - 99 Avenue
Anytown, AB
T0R 4X4

Dear Ms. Smith:

Your January 13th advertisement in The Journal described your need for a part-time ____. I believe that I have the experience and skills you require.

For the past two years I have been studying ________ at ______ high school, and I am most interested in continuing in this type of work as a career when I graduate. The enclosed résumé gives further details of my qualifications.

May I have a personal interview for the position advertised? You may contact me at the above address or by telephone (403) . . .-. . . after 4 p.m. daily.

Yours truly,

Pat Brown

Enclosure

SAMPLE LETTER OF INQUIRY

(A letter of inquiry should be keyboarded and follow a format similar to the sample below.)

4567 - 10 Street
Anytown, AB
T8N 3X1

January 15, 1990

Ms. J. Smith, Personnel Manager
ABC Warehouse
9911 - 99 Avenue
Anytown, AB
T0R 4X4

Dear Ms. Smith:

For the past two years I have been studying __________ at __________ high school. I am looking for a part-time job that is challenging and related to my career field. I recently visited your company on a community partnership activity and believe that I would make a valuable addition to it.

May I have an interview for a position that you might have available at this time or one that could become available in the near future?

My résumé is enclosed to help you discover how I might fit into your company. You may contact me at the above address or by telephone (403) . . .- . . .after 4 p.m. daily.

I look forward to hearing from you soon.

Sincerely yours,

Pat Brown

Enclosure

EVALUATION SHEET: LETTERS

Evaluate your own work and have your teacher or supervisor evaluate it too.

STUDENT'S NAME: ______________________ DATE: __________

MARKS:
S: STUDENT-ASSIGNED MARK
T: TEACHER-ASSIGNED MARK

ITEMS TO BE EVALUATED	POSSIBLE MARK	MARKS	
		S	T
1. Letter's layout is neat and attractive.	10		
2. Letter is set up in an acceptable business format.	10		
3. Letter contains no spelling or grammatical errors.	10		
4. Letter contains no unnecessary repetition of detail contained in résumé.	10		
5. Information is grouped logically.	10		
6. Letter has a strong opening which refers to the position desired.	10		
7. Body of letter emphasizes how the writer could be of use to the employer.	10		
8. Letter refers to enclosed résumé.	10		
9. Final paragraph indicates how the employer could contact the writer for an interview.	10		
10. Letter is typed or neatly written on good quality paper.	10		
TOTAL	100		

Comments: ____

____

Instructor's Signature: ______________________

PARTS OF A RÉSUMÉ

Before writing your résumé read Resource 23 "Alberta Human Rights Commission"

Résumés do not have to be long. In fact, employers tend to prefer typed résumés of not more than two or three pages. Your résumé should be brief but contain important facts about your education and work experience. A well-presented résumé may make the difference between the prospective employer reading your résumé or throwing it away.

Plan your résumé. Begin by writing a rough draft or by preparing a list of personal information under the following headings.

NAME, ADDRESS AND SOCIAL INSURANCE NUMBER

Use the last name you ordinarily use. Spell out your first name. Do not use just an initial. Show your address, including postal code, in full. Use your home phone number, including area code.

EMPLOYMENT OBJECTIVE

List the types of positions you are seeking.

EDUCATION

List your educational qualifications. Start with the most recent. You may want to list special training courses you took in high school or through organizations like St. John Ambulance.

AREAS OF KNOWLEDGE AND EXPERIENCE

List the knowledge gained from practical work experience. Do not include educational areas in which you have no practical work experience. Be honest and be sure you can back up every statement. If you do not have any practical work experience, this section may be left out of your résumé. Be sure to include any volunteer experience you have gained (e.g., baby-sitting, lawn maintenance, community work).

PERSONAL

You do not have to indicate your age. However, if you wish to, use your birthdate rather than your age. If you feel an item of personal information will prejudice your chance for an interview, omit it. For guidance refer to the "Pre-employment Inquiries" section of Resource 23, "Alberta Human Rights Commission."

INTERESTS

List all of your interests. Start with those that relate to the type of position you are seeking.

OTHER SKILLS

Many people have additional skills that may be useful in the workplace. Some of these skills may have been acquired as the result of past experiences, short courses, or a hobby or interest. Some of the things you might mention here are your ability to speak or write in another language, accounting or typing skills, or the type of driver's licence you hold.

REFERENCES

You do not have to list your references on your résumé. You may indicate "references available if required". Be sure to get permission from each reference before using it. Be prepared to supply the name, position, company name of the person referenced, address and phone number for each one.

The most important point to bear in mind when choosing a reference is that the person should have a favourable opinion of you. The second most important point is that each person should be in a position of responsibility and be able to give a reference that will be respected.

Do not use as a reference
- a relative
- anyone who shares your address
- a friend who is not in a position of responsibility.

Do use as a reference
- people for whom you have worked as a paid or volunteer employee
- recent teachers, especially those in job-related courses
- people with good oral and written communication skills.

HINTS ON WRITING A RÉSUMÉ

A résumé is your introduction to others. Make sure it makes a good impression.

Your résumé should suit the job you are seeking. This means one completed résumé may not be suitable for all jobs. Each method of organizing a résumé may be best suited to a different job and prospective employer. In general, when writing a résumé:

- Be brief and concise. One to three pages is usually adequate.
- Be clear. Say what you want to say in easy-to-understand terms.
- Be accurate. You may be checked on what you write.
- Be neat. Type your résumé on good quality paper.
- Be complete. Avoid abbreviations. Include all relevant information.
- Be consistent. Present similar information in a similar style and format.
- Be positive. A résumé should be positive in tone. Your choice of verbs can help. Words like "developed", "supervised", "initiated", "successfully introduced", "led", "increased" are positive ways of describing your past experience.
- Be thorough and accurate. Be sure the résumé is proofread for spelling, grammar, format by someone other than yourself, and correct any errors before sending it to the prospective employer.

SAMPLE RÉSUMÉ

Jane Smith
4567-10 Street
Anytown, AB
T0T 4T4
Phone: (403) 456-7890
SIN: 789 123 456

EMPLOYMENT OBJECTIVES:

I am seeking a job (in the/as ________) which makes use of my practical training and which will lead to a career in the ______________ business/industry.

EDUCATIONAL EXPERIENCE:

I am a student in __________ at __________ high school. The major areas of study in this program include:

•
•
•
•

I will graduate with a Certificate of Achievement in 19_.

WORK EXPERIENCE

Sales clerk: XYZ Department Store, 1987-88 (part-time and summer position)

Cashiering and waitressing: Fast Food Deli, 1988-89 (part-time and summer position).

PERSONAL INTERESTS:

Dancing, skiing and other outdoor activities, meeting people.

COMMUNITY SERVICE:

Member of local youth group and community choir. Worked as a volunteer at a local hospital and assisted in the organization of the young children's community summer festival.

Jane Smith
page 2

EQUIPMENT I CAN OPERATE:

Basic cash register, electric typewriter.

PERSONAL DATA: This information is optional. Read Resource 23, "Alberta Human Rights Commission."

Birthdate: January 14, 19_
Sex: female
Marital status: single
Health: excellent

PERSONAL REFERENCES:

Mr. Peter Johns, Teacher
Victory High School
1234 - 56 Avenue
Onetown, AB
T3Z 1Y4
Phone: (403) 323-4567

Ms. Mary White, Nurse
High Cross Hospital
5678 - 12 Street
Onetown, AB
T8N 4W9
Phone: (403) 345-6789

Mrs. Joan Waters, Manager
Best Department Store
8508 - 29 Avenue
Onetown, AB
T0B 0X0
Phone: (403) 333-4444

EVALUATING A RÉSUMÉ

Evaluate your own work and have your teacher evaluate it too.

STUDENT'S NAME: ______________________ DATE: __________

MARKS:
S: STUDENT-ASSIGNED MARK
T: TEACHER-ASSIGNED MARK

ITEMS TO BE EVALUATED	POSSIBLE MARK	MARKS	
		S	T
1. Résumé layout is neat and attractive.	10		
2. Résumé is set up in an acceptable business format.	10		
3. Presentation of information is consistent in layout and style.	10		
4. Sections for personal data, experience, education and references are included in the résumé.	10		
5. If identified, the work objective is clearly and simply stated.	10		
6. All information presented is relevant.	10		
7. All statements are positive. Student's strong points are emphasized.	10		
8. Résumé is directed toward specific job sought.	10		
9. Résumé contains no spelling or grammatical errors.	10		
10. Résumé is typed or neatly written on good quality paper.	10		
11. Other.			
TOTAL	100		

Comments: ______________________________________

____

Instructor's Signature: ______________________

SAMPLE THANK YOU LETTER

(A thank you letter should be keyboarded and follow a format similar to the sample below.)

4567 – 10 Street
Anytown, Alberta
T0T 4T4

February 1, 1990

Ms. J. Smith, Personnel Manager
ABC Warehouse
9911 – 99 Avenue
Anytown, Alberta
T0R 4Y4

Dear Ms. Smith:

Thank you for your prompt attention to my letter requesting a copy of your company's most recent catalogue.

The catalogue is attractive and informative, and specific items are easily identified. I am sure the information it contains will assist me in my study of the types of services offered by companies in the warehousing industry.

Yours truly,

Pat Brown

GUIDELINES FOR COMPLETING A JOB APPLICATION FORM

GENERAL GUIDELINES

- Many large companies require job applicants to fill out application forms. A standard application form allows an employer to ask for the exact information required and to compare information from all applicants more easily. If you apply for a job by letter you may be mailed an application form to complete and return, or you may be called for an interview and asked to fill one out on-site. In either case, have your résumé or other career information with you so you can supply complete and accurate information.

- Fill out the application form fully. If you cannot answer a question or the question does not apply to you, or you believe it is an inappropriate question, place a horizontal line or write N/A ("not applicable") neatly in the space to show that you did not omit the question.

- Read the directions carefully and remember that neatness in filling out the form will be considered by the employer. Most companies ask that you print in ink when filling out an application form. Take your time. Think out your answers so that you do not have to cross out or erase.

- Because some application forms ask open-ended questions such as, "Why do you want to work for this company?" or "Why do you want this job?", you should prepare yourself to answer questions of this kind before you fill out an application form.

GUIDELINES FOR EACH SENTENCE OF A JOB APPLICATION FORM

SOCIAL INSURANCE NUMBER

If you have never obtained a social insurance number, apply for one. Do not delay the job search by waiting for a reply. Instead, write "Applied for" in the blank on the application form, until a number is received.

CITIZENSHIP

An employer may only ask if you are legally entitled to work in Canada.

TELEPHONE NUMBER

Give your home telephone number. If possible, also give a second number where someone could take a message for you.

POSITION DESIRED

Usually you know what position you are seeking. However, a company may have a variety of positions of interest to you. If so, list them all rather than just one. In some cases, you may not know what types of positions a company has. In this case, contact the company and ask what some of the common types of jobs are, as well as what openings the organization may have. List several types of jobs the company might consider, such as "driver", "machine operator" and "maintenance". The more you list, the more types of jobs you will be considered for.

DESIRED WEEKLY EARNINGS

If you know the company's standard wages for the position you're seeking, write in that figure. If not, either leave the space blank or write "Open" or "Normal rate". These answers indicate that you have no absolute minimum. The risk in putting a high figure here is that the employer may feel it is too high and not interview you, when, in fact, the employer may offer an even higher salary after talking to you.

BONDABLE

This question refers to the practice of obtaining a type of insurance on employees who are in a position of financial responsibility. If you do not have a criminal record, you are probably bondable.

CAR AVAILABLE

If you do not have a car, but would get one for the right kind of job, write "If required".

PAST EMPLOYMENT AND REASON FOR LEAVING

For each job recorded on an application form, you may be asked your reason for leaving. There are usually several reasons for leaving a job. Reasons such as lay-off, illness or business closure are considered acceptable. Leaving to gain more varied work experience, more responsibilities and more money are also considered acceptable reasons. Reporting being fired for wrongdoing or because of insufficient effort may create a negative impression of your potential as a new employee. If you report being fired for negative behaviour, you should be prepared to indicate elsewhere (i.e., in the comments section) that you have learned from past errors and that you are now ready to accept responsibility and to behave properly on the job.

SOCIAL

Questions related to your interests, hobbies, activities, etc., are designed to find out what you do outside of school and the workplace. In some companies, the willingness and ability to participate in social activities are considered important to staff morale and well-being.

COMMENTS

This section permits a job applicant to provide other job-related information. It also allows a job applicant to tell a prospective employer why he or she would like to work for the company. A well thought out statement commencing with "I would like to work for your company because . . ." may create a very positive impression.

SAMPLE DETAILED JOB APPLICATION FORM

APPLICATION FOR EMPLOYMENT

PURPOSE

THIS APPLICATION IS DESIGNED TO HELP BOTH YOU AND US. IF YOU ARE EMPLOYED BY US, THE INFORMATION CONTAINED IN THIS APPLICATION WILL HELP US TO UNDERSTAND YOU AS A PERSON, YOUR NEEDS, YOUR *CAREER GOALS* AND YOUR INTERESTS. THE INFORMATION YOU GIVE WILL BE TREATED AS CONFIDENTIAL.

Consideration for employment is based solely on qualifications without regard to race, creed, colour, age, sex, marital status, nationality, ancestry or place of origin.

GENERAL

DATE | SOCIAL INSURANCE NUMBER | ALBERTA HEALTH CARE NUMBER

NAME – PLEASE PRINT | MAIDEN NAME (IF MARRIED)

PRESENT ADDRESS | POSTAL CODE | DATE YOU MOVED TO PRESENT ADDRESS

PREVIOUS ADDRESS IN CANADA | DATES YOU LIVED THERE

AREA CODE ( ) TELEPHONE NUMBER | TYPE OF EMPLOYMENT REQUIRED ☐ FULL-TIME ☐ PART-TIME

WHAT POSITION ARE YOU APPLYING FOR WITH OUR COMPANY

WHAT OTHER KINDS OF WORK WOULD YOU MOST LIKE TO TRY IF YOU HAD THE OPPORTUNITY? | DRIVER'S LICENCE NO. (IF APPLICABLE) | CLASS

LOCATION

NAME AND LOCATION OF SCHOOL (LIST NAMES AND CITY)	NO. OF YEARS	GRADE COMPLETED	WHAT YEAR	NATURE OF COURSE TAKEN AND DEGREE (IF ANY)	AGE AT LEAVING
PUBLIC SCHOOL					
HIGH SCHOOL					
UNIVERSITY					

LIST ANY SPECIAL SCHOOLING OR TRAINING EXTENSION – BUSINESS – DIPLOMAS

LIST ANY LANGUAGE SPOKEN – OTHER THAN ENGLISH

PERSONAL REFERENCES

NON- RELATIVES, WHO CAN VOUCH FOR YOUR CHARACTER AND ABILITY

NAME – STREET ADDRESS TOWN OR CITY	OCCUPATION	TELEPHONE NO.
1.		
2.		
3.		

FOR RECORD PURPOSES ONLY

FOR OFFICE USE ONLY

DATE OF BIRTH

AGE

IN CASE OF ACCIDENT NOTIFY

NAME

ADDRESS

TELEPHONE

PERSONAL

ARE YOU LEGALLY ELIGIBLE TO WORK IN CANADA?

☐ NO ☐ YES

THOSE SO ENTITLED ARE CANADIAN CITIZENS OR LANDED IMMIGRANTS
HOLDERS OF VALID WORK PERMITS
PROOF OF ELIGIBILITY MAY BE REQUIRED

WERE YOU PREVIOUSLY EMPLOYED BY US?

☐ NO ☐ YES - INDICATE WHEN AND WHERE

HAVE YOU EVER BEEN CONVICTED OF A CRIME

☐ NO ☐ YES - GIVE DETAILS

HAVE YOU EVER BEEN DISCHARGED OR RELEASED FROM A JOB?

☐ NO ☐ YES - GIVE DETAILS

HAVE YOU EVER BEEN BONDED?

☐ NO ☐ YES - ON WHAT JOBS

HAS YOUR APPLICATION FOR BOND EVER BEEN DECLINED?

☐ NO ☐ YES

NAMES OF RELATIVES AND ACQUAINTANCES IN OUR EMPLOY

COMPANY OPERATIONS MAY REQUIRE WORK TO BE SCHEDULED ON ANY OF THE DAYS OF THE WEEK. ARE YOU WILLING TO WORK SUCH A SCHEDULE? ☐ YES ☐ NO

WOULD YOU RELOCATE? ☐ NO ☐ YES

EMPLOYMENT HISTORY (List your most recent employment first)

COMPANY NAME 1	ADDRESS			CITY	
TYPE OF BUSINESS	DATES EMPLOYED	FROM (MO - YR)	TO (MO YR)	WEEKLY EARNINGS	START $	END $
JOB TITLE AND DUTIES						
SUPERVISOR'S NAME AND TITLE				TELEPHONE NO (IF KNOWN)		
WHY DID YOU LEAVE? (IF STILL EMPLOYED, WHY DO YOU WISH TO LEAVE?)						
COMPANY NAME 2	ADDRESS			CITY		
TYPE OF BUSINESS	DATES EMPLOYED	FROM (MO YR)	TO (MO YR)	WEEKLY EARNINGS	START $	END $
JOB TITLE AND DUTIES						
SUPERVISOR'S NAME AND TITLE				TELEPHONE NO (IF KNOWN)		
WHY DID YOU LEAVE? (IF STILL EMPLOYED, WHY DO YOU WISH TO LEAVE?)						

COMPANY NAME 3			ADDRESS		CITY	
TYPE OF BUSINESS	DATES EMPLOYED	FROM (MO. YR.)	TO (MO. YR.)	WEEKLY EARNINGS	START $	END $

JOB TITLE AND DUTIES

SUPERVISOR'S NAME AND TITLE	TELEPHONE NO. (IF KNOWN)

WHY DID YOU LEAVE? (IF STILL EMPLOYED, WHY DO YOU WISH TO LEAVE?)

DRIVERS APPLICANTS FOR JOBS DRIVING COMPANY VEHICLES

PLEASE LIST ALL TRAFFIC CONVICTIONS OVER PAST THREE YEARS

PLEASE LIST ANY AUTOMOTIVE ACCIDENTS DURING PAST THREE YEARS

DO YOU OWN A CAR?	MAKE	YEAR	IS YOUR CAR SUITABLE AND AVAILABLE FOR WORK?

SOCIAL

WHAT ARE YOUR OTHER INTERESTS, ACTIVITIES, ETC.

A OUTDOOR, ATHLETICS, ETC.

B INDOOR, SOCIAL, ETC.

OF WHAT SOCIAL CLUBS OR ORGANIZATIONS ARE YOU A MEMBER? EXCLUDE ORGANIZATIONS OF A RELIGIOUS, RACIAL OR POLITICAL CHARACTER, IF YOU SO DESIRE.

COMMENTS

LIST ANY FURTHER DETAILS YOU FEEL THE INTERVIEWER SHOULD KNOW

I DECLARE THAT THE FACTS SET FORTH ABOVE IN MY APPLICATION FOR EMPLOYMENT ARE TRUE AND COMPLETE. I UNDERSTAND THAT IF I AM EMPLOYED, FALSE STATEMENTS ON THIS APPLICATION SHALL BE SUFFICIENT CAUSE FOR DISMISSAL REGARDLESS OF SENIORITY OR OTHER CONSIDERATIONS. I ALSO UNDERSTAND THAT A CONSUMER REPORT CONTAINING PERSONAL INFORMATION AND/OR CREDIT INFORMATION IS BEING, OR MAY BE, REFERRED TO IN CONNECTION WITH THIS APPLICATION.

DATE ______________________ SIGNATURE OF APPLICANT ____________

EVALUATION OF A JOB APPLICATION FORM

Evaluate your own work and have your teacher evaluate it, too.

STUDENT'S NAME: ______________________ DATE: __________

MARKS:
S: STUDENT-ASSIGNED MARK
T: TEACHER-ASSIGNED MARK

ITEMS TO BE EVALUATED	POSSIBLE MARK	MARKS	
		S	T
1. No spaces on the application form have been left blank unless marked "for office use only".	2		
2. All blanks are filled in accurately giving information requested.	5		
3. Form is completed in blue or black ink.	2		
4. Printing or writing is legible.	5		
5. Information provided is specific.	5		
6. Information provided contains no spelling or grammatical errors.	5		
7. Information is clearly and concisely presented.	6		
Other			
TOTAL	30		

Comments: ____

____

Instructor's Signature: ______________________

6. MATHEMATICAL SKILLS

Each IOP course is designed to assist students to develop the ability to use basic mathematical concepts and skills and to develop an appreciation of the importance of computational competence and problem-solving skills as both a life and a work skill.

Teachers of occupational courses should attempt to:

- integrate lesson planning with teachers of IOP mathematics (see Suggested Teaching Strategies, "AVID")
- integrate appropriate level mathematics into normal use of equipment, tools and supplies
- include basic mathematical skills as a component of student evaluation
- use metric, imperial and U.S. measures where appropriate
- encourage students to use calculators and measuring tools correctly as both a life and a work skill.

Mathematical skills may be integrated with occupational courses in a variety of ways including:

- checking inventories
- checking change received
- estimating supply requirements and costs of a project or service
- measuring (e.g., area, length, mass, temperature, volume)
- making change
- understanding paychecks
- writing bills and work orders.

The concepts, skills and attitudes included in this unit include:

1. Uses metric units of measurement
2. Uses imperial and U.S. units of measurement where necessary
3. Performs basic numeric calculations using whole numbers, fractions and decimals
4. Uses appropriate strategies to calculate ratio, proportion and percent
5. Counts money to $1 000.00
6. Makes change to $100.00.

RESOURCES

STUDENT RESOURCE

- *Working: Today and Tomorrow*, Canadian Edition. Toronto, Ontario: Irwin Publishing, 1990.

Correlation of Learning Objectives with Student Resource

Concepts, Skills and Attitudes	*Working: Today and Tomorrow*
6. Mathematical Skills	Chapter 1 "The Value of Transferable Skills"

180

TEACHER RESOURCES

- Resource 51, "Metric Practice Guide for Teachers"
- Resource 52, "Measuring Tools and Units of Measurement Chart"
- Resource 53, "Materials Unit of Sale Chart"
- Resource 54, "Sample Work Order"
- Resource 55, "Change Bank"
- Resource 56, "Cash Handling Procedures Guide"
- Community partners.

1. METRIC UNITS OF MEASUREMENT
2. IMPERIAL AND U.S. UNITS OF MEASUREMENT

Each student workbook contains activities and job sheets that require students to use and further develop mathematical skills. Teachers are encouraged to supplement and complement these activities with other activities that integrate new and reinforce previously learned mathematical concepts, skills and attitudes. Relevant information from Resource 51, "Metric Practice Guide for Teachers", may be provided to students to facilitate their use of SI metric units of measurement.

Metric and Non-Metric Measurement

Alberta Education's Metrication Policy includes the following:

1.1 **SI units become the principal system of measurement in the curriculum of the schools in the province.**

1.1 It has become imperative that the school curriculum prepare students to cope with metric measures in all facets of their life. In addition, many students will require a detailed knowledge of more specialized units used in specific career fields.

1.3 Resource materials for the classroom should use SI units as the principal measuring system with only such references to the imperial or "old" metric systems as are unavoidable.

2.3 It is entirely possible that some of the high school technical and vocational programs will have a need to continue teaching the use of imperial units. It may take a specific technological area some considerable time to make the change, especially one that uses machinery with a long working life.

4.3 Since measurement is an activity related process, it follows that individuals — teachers as well as students — learn the metric units while measuring or in using the units that one is learning.

In accordance with the provincial metrication policy, teachers should:

- **use SI units of measurement whenever possible in activities**
- **use imperial or other non-metric units only where the use of such measurement parallels its common usage in occupations.**

Suggested Activities/Community Partnerships

1. Investigate the use of units of measurement in the workplace by:
   - visiting a work site and observing the use of measurement tools and units. Use Resource 52, "Measuring Tools and Units of Measurement Chart", to record your observations.
   - inviting community partners to discuss with the class the use of SI metric and non-metric tools and units in occupations.

2. Discuss:
   a. What are the advantages/disadvantages of using
      - metric units of measurement?
      - imperial units of measurement?

   b. Why do some businesses (e.g., supermarkets) use both metric and imperial units in their display of unit prices (e.g., $.90/lb, $1.98/kg)?

3. Visit a local company that supplies materials to the school/workplace and identify and record two or more items that are usually sold by:
   - area
   - length
   - volume
   - mass.

   Use Resource 53, "Materials Unit of Sale Chart", to record your observations and discussions.

3. NUMERIC CALCULATIONS
4. RATIO, PROPORTION, PERCENT

Basic numeric calculations using whole numbers, fractions and decimals and the use of ratio, proportion and percent are process activities. Some IOP students tend to experience difficulty comprehending process skills; it is important that they be given the opportunity to learn to perform numeric calculations in concrete contexts.

Suggested Activities/Community Partnerships

1. Invite guest speakers from occupations to discuss:
   - the use of numeric calculations skills in the workplace
   - if the ability to perform basic calculations is an important entry-level skill, and why
   - what calculating tools (e.g., calculator, cash register) are used in workplaces?

2. Invite a guest speaker from a local bank, credit union or loan company to discuss the services offered to:
   - individual account customers
   - business accounts
   - people wanting to start their own business.

3. a. Maintain a record of time spent on various tasks and time spent on a part-time job (refer to section on Organizational Skills: Resource 26, "Time Grid").

   b. What proportion of your time each day is spent:
      - at school?
      - at a part-time job?
      - on social activities?
      - studying?
      - sleeping?

c. If you wanted to increase your daily study time by twenty percent, from where would you take the time? How much time would you have to take from one or more of your other daily activities?

4. If you have a part-time job, look at your paycheck (i.e., the detailed statement showing earnings and deductions) for the last pay period:

   a. What were your gross earnings?

   b. What were your deductions for:
      - income tax?
      - unemployment insurance?
      - workers' compensation?

   c. What percentage of your gross earnings were deducted in total?

   d. What percentage of your gross earnings was each deduction?

   e. If you received a five percent increase, how much more would you be earning
      - hourly?
      - weekly?
      - annually?

5. COUNTING MONEY
6. MAKING CHANGE

In some occupational courses, (e.g., business services, esthetology, food services, hair care, horticulture services) students may be expected to learn the role of a cashier. Cashiers need to be able to:
- add columns of figures
- accept money (e.g., cash, cheques, credit cards)
- make change
- keep records
- balance accounts
- operate a cash register or cash drawer.

In some situations, cashiers may also be required to sell other products to customers. Their main task, however, is to handle money correctly.

Students in other occupational courses may not be expected to handle money. They may, however, be required to write work orders and to estimate and total the costs of labour, parts and other charges involved in a job (e.g., agricultural mechanics, automotive services, warehouse services).

General procedures for counting money, making change and completing work orders are shown, when appropriate, in student workbooks. Community partnership activities will enable students to gain increased understanding of specific procedures used in different workplaces.

Suggested Activities/Community Partnerships

1. Work orders are used in a variety of occupations (e.g., service stations, garden care, radio and television repair) to keep accounts of all the work performed and materials supplied. Resource 54, "Sample Work Order", shows a work order commonly used in service stations. Using this sample as a guide:

   a. Create a work order that may be used in this course.

   b. Complete a work order for each customer service task you perform.

   c. At the end of each week/month, calculate the totals for:
      - labour
      - parts or supplies
      - amount of money paid by all customers during the period
      - other.

   d. If the profit margin on the total amount of money received is fifteen percent, how much profit was made during the period?

2. A float is an initial amount of cash deposited in a cash register (paper money and coins). It is used to make change for customers.

   a. Set up a float of $100 for a business and ensure that an appropriate amount of each denomination of paper money and coin is included. (Resource 55, "Change Bank" may be used in this activity.)

3. Job shadow a cashier in a business and observe how:
   - cash (paper money and coins) is received and checked
   - change is made (What is the checking procedure used?)
   - credit card purchases are handled
   - large denomination bills are stored
   - personal checks are handled
   - cash drawer is balanced at the end of a shift/day.

   Use Resource 56, "Cash Handling Procedures Guide", to record your observations.

4. Discuss:
   - Handling money is a responsibility in business. What precautions should a cashier/receptionist take to ensure money (cash and credit sales) is properly handled?

5. Invite community partners (e.g., cashier, receptionist, business operator/owner) to discuss the responsibilities of a cashier. Questions that may be asked include:
   - Who is responsible if the money does not balance with the sales slips?
   - Are counterfeit bills a problem? How can they be recognized?
   - Are "short-change artists" a problem? What confidence tricks do "short-change artists" use? What should a cashier do when confronted by one?

6. Practise receiving money, making change and dealing with related problems through real-life work experience as well as by role playing.

METRIC
PRACTICE GUIDE

for

TEACHERS

BASED ON ACCEPTED CANADIAN

This document is published solely as information providing current metric practices as accepted by the Standards Council of Canada.

PREPARED FOR DISTRIBUTION TO
ALBERTA SCHOOLS IN CO-OPERATION WITH
ALBERTA GOVERNMENT SERVICE, METRIC BRANCH
AND
ALBERTA EDUCATION

This supplementary practice guide was prepared by the following member of the Calgary Board of Education:
Dick Holmes, Education Consultant
Sue Buchanan, Science Specialist
Bob Bushell, Teacher
Marshall Bye, Mathematics Supervisor
Bob Michie, Secondary Math Consultant

1982 11 15

CONTENTS

	Page
USING UNITS	182
USING SYMBOLS	182
USING NUMERALS	183
TABLE OF SI PREFIXES	185
UNITS, PREFIXES AND SYMBOLS (Listed Alphabetically)	186
SUMMARY OF COMMONLY USED UNITS (Listed by Quantity)	190
INTERRELATIONSHIPS	191
NUMERIC DATING	191
24-HOUR TIMEKEEPING SYSTEM	191

USING UNITS

1. Unit names are spelled out in lowercase letters.
   e.g., litre newton kilogram

   Exception – degree Celsius

2. Only one prefix is used with a unit at one time.
   e.g., centilitre decimetre

3. If a compound unit involving division is spelled out, the word "per" is used.
   e.g., metres per second revolutions per minute

4. If a compound unit involving multiplication is spelled out, no hyphen is used.
   e.g., kilowatt hour

5. The choice of the appropriate decimal multiple or sub-multiple of a unit is governed by convenience. However, the use of prefixes representing 10 raised to a power that is a multiple of 3 is recommended.
   e.g., 0.6 km $(m \times 10^3)$ rather than 6hm $(m \times 10^2)$

USING SYMBOLS

1. The symbols are always printed in upright type.
   e.g., m g °C L

2. Symbols are written in lowercase letters, except when the unit name is derived from a proper name.
   e.g., m s N Pa

   Exception – L (litre) the symbol ℓ is not acceptable.

3. When the names of units which derive from a proper name are written out in full, only Celsius is capitalized.
   e.g., newton pascal

4. Symbols should be used with numerals.
   e.g., 7 cm seven centimetres

5. Symbols are never pluralized.

6. A symbol is not followed by a period (except at the end of a sentence).

7. Symbols for prefixes are shown in lowercase except for those that are greater then "kilo".
   e.g., kW (kilowatt) MW (megawatt)

8. Exponents are used with symbols for units that are squared or cubed.
   e.g., m^2 cm^3

9. Symbols should not be used to start a sentence.

10. Compound symbols formed by dividing units contain a solidus (/) to indicate the division.
    e.g., km/h (kilometres per hour) r/min (revolutions per minute)

11. The solidus, as a symbol of division, must not be repeated in the same expression unless ambiguity is removed by the use of brackets.
    e.g., (m/s)/s is acceptable
    m/s^2 is preferable

12. Division by a unit may be shown by means of a negative exponent. In such cases, the dot must also be used to avoid misunderstanding.
    e.g., $m \cdot s^{-1}$ (metre per second)

13. When a unit is formed by division, the prefix, if any, should be attached to a unit in the numerator.
    e.g., km/s not m/ms

    Exception – When the base unit "kilogram" appears in a denominator.
    e.g., MJ/kg is preferred to kJ/g.

14. Compound symbols formed by multiplying units contain a dot to indicate multiplication.
    e.g., kW•h (kilowatt hour) N•m (newton metre)

USING NUMERALS

1. A space is left between the last digit of a numeral and the first letter of the symbol.
   e.g., 45 g 60 MW

   Exception – When the first character of a symbol is not a letter, no space is left.

   e.g., 15°C 30° 20 ′40″ (30.344° is the method used with computers and in compilation)

2. A decimal fraction is indicated by means of a decimal marker on the line and at present, in Canada, the marker is generally a point positioned in line with the base of the associated numeral.

3. Spaces, not commas, are left between groups of 3 digits to the left and right of the decimal marker.

   Note: The space is optional if there are only 4 digits to the left or right of the decimal, unless such numerals are listed in a column with other numerals of 5 digits or more.
   e.g., 12 345,678 901 2
   1245 (1 245 optional)
   5.1234 (5.123 4 optional) but 5.123 45

   Exception – These guidelines do not apply to monetary units used on negotiable instruments. To help avoid fraud (filling in the space with a numeral), negotiable instruments will continue to use a comma. Students should recognize both forms of writing numerals.

4. Decimal fractions are generally preferred to common fractions.

5. A zero is placed to the left of the decimal marker to indicate that there is no other digit to the left.
   e.g., 0.25

6. In general, only one unit should be used to express a measured quantity.
   e.g., 1.15 m is preferred to 1 m 15 cm

7. In general, in the expression of any quantity, a prefix should be chosen so that the numerical value lies between 0.1 and 1000. However, when similar quantities are compared, it is better to use the same prefix for all items even though some values may fall outside the 0.1 to 1000 range.

8. A dot must not be used as a multiplier between numerals.
   e.g., 5×7 not 5•7

9. In the expression of numbers over ten, digits are preferred to fully spelled out words.
   e.g., 28 m

TABLE OF SI PREFIXES*

Multiplying Factor	Prefix	Symbol
1 000 000 000 000 000 000 = 10^{18}	exa	E
1 000 000 000 000 000 = 10^{15}	peta	P
1 000 000 000 000 = 10^{12}	tera	T
1 000 000 000 = 10^{9}	giga	G
1 000 000 = 10^{6}	mega	M
1 000 = 10^{3}	kilo	k
100 = 10^{2}	hecto	h
10 = 10^{1}	deca	da
0.1 = 10^{-1}	deci	d
0.01 = 10^{-2}	centi	c
0.001 = 10^{-3}	milli	m
0.000 001 = 10^{-6}	micro	µ
0.000 000 001 = 10^{-9}	nano	n
0.000 000 000 001 = 10^{-12}	pico	p
0.000 000 000 000 001 = 10^{-15}	femto	f
0.000 000 000 000 000 001 = 10^{-18}	atto	a

*Canadian Metric Practice Guide
National Standard of Canada
CAN 3-Z234.1-79
Canadian Standards Association

191

UNITS, PREFIXES AND SYMBOLS

Name of unit or Prefix	Symbol	Quantity	Practical Equivalent
ampere	A	electric current	base unit
ampere per metre	A/m	magnetic field strength	
candela	cd	luminous intensity	base unit
candela per square metre	cd/m^2	luminance	
centi	c	prefix	$10^{-2} = 0.01$
centilitre	cL	capacity	0.01 L
centimetre	cm	length	0.01 m
coulomb	C	electric charts	A•s
cubic centimetre	cm^3	volume	1 cm^3 (volume) = 1 mL (capacity)
cubic metre	m^3	volume	1 m^3 (volume) = 1 kL (capacity)
cubic metre per mole	m^3/mol	molar volume	
cubic metre per second	m^3/s	volume flow rate	
day	d	time	24 h
deca	da	prefix	$10^1 = 10$
decalitre	daL	capacity	10 L
decametre	dam	length	10 m
deci	d	prefix	$10^{-1} = 0.1$
decilitre	dL	capacity	0.1 L
degree Celsius	°C	temperature	
degree (of arc)	°	angle	$180° = \pi rad$
farad	F	electric capacitance	C/V
giga	G	prefix	10^9
gram	g	mass	0.001 kg
gram per cubic centimetre	g/cm^3	density	1 gm/cm^3 = 1 000 kg/m^3
gram per millilitre	g/mL	density	1 gm/mL = 1 g/cm^3
hectare	ha	area	10 000 m^2
hecto	h	prefix	$10^2 = 100$

Name of unit or Prefix	Symbol	Quantity	Practical Equivalent
hectometre	hm	length	100 m
henry	H	inductance	Wb/A
hertz	Hz	frequency	$s^{-1} = \frac{1}{s}$
hour	h	time	60 min
joule	J	energy	
joule per kilogram	J/kg	specific energy	
joule per kilogram kelvin	J/(kg•K)	specific heat capacity	
kelvin	K	temperature	base unit
kilo	k	prefix	10^3 = 1 000
kilogram	kg	mass	base unit
kilogram metre per second	kg•m/s	momentum	
kilogram per cubic metre	kg/m^3	density	g/L
kilohertz	kHz	frequency	1 000 Hz
kilolitre	kL	capacity	1 000 L
kilometre	km	length	1 000 m
kilometre per hour	km/h	speed	
kilonewton	kN	force	1 000 N
kilopascal	kPa	pressure	1 000 Pa
kilowatt	kW	power	1 000 W
litre	L	capacity	1 L (capacity = 1 cm^3 (volume)
lumen	lm	luminous flux	cd•sr
lumen second	lm•s	quantity of light	
lux	lx	illuminance	lm/m^2
lux second	lx•s	light exposure	
mega	M	prefix	10^6 = 1 000 000
megagram	Mg	mass	1 000 000 g
metre	m	length	base unit
metre per second	m/s	speed, velocity	3.6 km/h

Name of unit or Prefix	**Symbol**	**Quantity**	**Practical Equivalent**
micro	μ	prefix	$10^{-6} = 0.000\,001$
micrometre	μm	length	10^{-6} m
milli	m	prefix	$10^{-3} = 0.001$
millilitre	mL	capacity	0.001 L
millimetre	mm	length	0.001 m
minute	min	time	60 s
minute (of arc)		angle	60′ = 1°
mole	mol	amount of substance	base unit
mole per litre	mol/L	concentration	
newton	N	force	kg•m/s^2
newton metre	N•m	moment of force torque energy	1 J
ohm	Ω	electric resistance	V/A
pascal	Pa	pressure	N/m^2
pascal second	Pa•s	dynamic viscosity	
radian	rad	plane angle	πrad = 180°
radian per second	rad/s	angular velocity	$\frac{180}{\pi}$°/s
revolution per minute	r/min	frequency	
revolution per second	r/s	frequency	
second	s	time	base unit
second (of arc)	″	angle	60″ = 1′
siemens	S	electric conductance	A/V
square centimetre	cm^2	areas	0.00 1 m^2
square metre	m^2	area	10 000 cm^2
square metre per second	m^2/s	kinematic viscosity	
steradian	sr	solid angle	
tesla	T	magnetic flux density	Wb/m^2 or N/A•m
tonne (metric ton)	t	mass	1 000 kg
volt	V	electric potential	W/A or J/C

Name of unit or Prefix	**Symbol**	**Quantity**	**Practical Equivalent**
volt	V/m	electric field strength	$10^{-6} = 0.000\,001$N/C
watt	W	power	J/s
watt per metre kelvin	W/(m•k)	heat conductivity	
watt per square metre	W/m^2	heat flux density	
weber	Wb	magnetic flux	V•s or J/A
year (annum)	a	time	365.25 d

SUMMARY OF COMMONLY USED UNITS

Quantity	Unit	Symbol	Relationship
Length	kilometre	km	1 km = 1 000 m
	metre	m	1 m = 10 dm = 100cm
	decimetre	dm	1 dm = 10 cm
	centimetre	cm	1 cm = 10 mm
	millimetre	mm	
Area	square kilometre	km^2	$1\ km^2 = 100\ h$
	hectare	ha	$1\ ha = 10\ 000\ m^2$
	square metre	m^2	$1\ m^2 = 10\ 000\ cm^2$
	square centimetre	cm^2	
Volume	cubic metre	m^3	$1\ m^3 = 1\ 000\ 000\ cm^3$
	cubic centimetre	cm^3	
Capacity	kilolitre	kL	1kL = 1 000 L
	litre	L	1 L = 1 000 mL
	millilitre	mL	
Concentration	mole per litre	mol/L	
	mole per cubic metre	mol/m^3	
Mass	megagram	Mg	1 Mg = 1 t
	tonne (metric ton)	t	1 t = 1 000 kg
	kilogram	kg	1 kg = 1 000 g
	gram	g	1 g = 1 000 mg
	milligram	mg	
Time	day	d	1 d = 24 h
	hour	h	1 h = 60 min
	minute	min	1 min = 60 s
	second	s	
Velocity (Speed)	metre per second	m/s	1 m/s = 3.6 km/h
	kilometre per hour	km/h	
Density	kilogram per cubic metre	kg/m^3	$1\ t/m^3 = 1\ 000\ kg/m^3$
	tonne per cubic metre	t/m^3	$1\ g/sm^3 = 1\ 000\ kg/m^3$
	gram per cubic centimetre	g/cm^3	
Density (of liquids)	kilogram per litre	kg/L	$1\ kg/L = 1\ 000\ kg/m^3$
	gram per millilitre	g/mL	$1\ g/mL = 1\ 000\ kg/m^3$
Frequency	hertz	Hz	
Plane Angle	radian	rad	$1\ rad = \frac{180^\circ}{\pi}$
	degree	°	
	minute	′	$1^\circ = 60'$
	second	″	$1' = 60''$

Quantity	Unit	Symbol	Relationship
Amount of substance	mole	mol	
Electric current	ampere	A	
Electrical resistance	ohm	Ω	
Energy	J		
Force	newton	N	
Potential difference	volt	V	
Pressure	pascal	Pa	
Temperature	degrees Celsius	°C	

INTERRELATIONSHIPS

Excluding the mass of the container:
A cube 1 cm × 1 cm × 1 cm if filled with water at 4 °C holds 1 mL and has a mass of 1 g.

A cube 10 cm × 10 cm × 10 cm if filled with water at 4 °C holds 1 L and has a mass of 1 kg.

A cube 1 m × 1 m × 1 m if filled with water at 4 °C holds 1 000 L and has a mass of 1 t.

NUMERIC DATING*

Numeric dating is simply a means of expressing the date by means of numbers. The year, month and day in descending order of magnitude are expressed with 8 digits: 4 for the year, 2 for the month and 2 for the day. For example, April 7, 1975 can be expressed as 1975 04 07 or 1975-04-07.

The logic of this technique of recording a date becomes apparent when one is looking up past records that are arranged chronologically. One would first search for the year, then the month and finally the day.

24-HOUR TIMEKEEPING SYSTEM**

Sequence – The sequence of time elements in the 24-hour timekeeping system shall be:
hour minute second (if required)

Separator – A colon shall be used as the separator between hour and minute, and between minute and second.

Note: The symbols h, min, and s are not used because they are the symbols for hour, minute and second in the sense of duration or length of time. Thus 14 h 30 min expresses a measured time duration of fourteen hours and thirty minutes, while 14:30 refers to the time of day, (i.e., two hours and thirty minutes past noon;) 14 h 30 is ambiguous and should therefore not be used.

The absence of any separator (i.e., writing 14:00 incorrectly as 1400 or 1400 h) may give rise to the misleading practice of referring to that time as "fourteen hundred hours". It is suggested that, in speech, 14:00 may be expressed as "fourteen", "fourteen hours" or "fourteen zero zero".

e.g.,	Time	READ
	00:00	zero hour (instant of midnight, beginning of day)
	00:15	zero fifteen
	03:00	three hours
	16:30	sixteen thirty
	15:43	fifteen forty-three
	24:00	twenty-four hours (instant of midnight, end of day)

Note: Numeric dating and the 24 hour timekeeping system are not part of SI but provided for general information.
When the figure 24 is used to represent the hour, it is never followed by any digits except zeros.

* The Metric Guide
Council of Ministers of Education
Second Edition
March, 1976

** National Standard of Canada
All-Numeric Dates and Times
CAN3-Z234.4-79

MEASURING TOOLS AND UNITS OF MEASUREMENT CHART

Visit a local company and identify the types of measuring tools and the units of measurement used. Record your observations on the chart below.

Course: ____________________ Student's Name: ______________________

Workplace visited: ________________________ Date: __________________

Types of Measuring Tools	Name of Units of Measurement	Metric	Imperial	Other
e.g., ruler	mm, cm, m	✓		

MATERIALS UNIT OF SALE CHART

Visit a local company that supplies materials. With the supervisor's permission, identify, through observation and discussion, the items usually sold by area, length, volume or mass. Record your observations below.

ITEM	SOLD BY:				UNIT OF MEASUREMENT	METRIC/ IMPERIAL
	Area	Length	Volume	Mass		
e.g., apples				✓	Kg	
e.g., gasoline			✓		L	

SAMPLE WORK ORDER

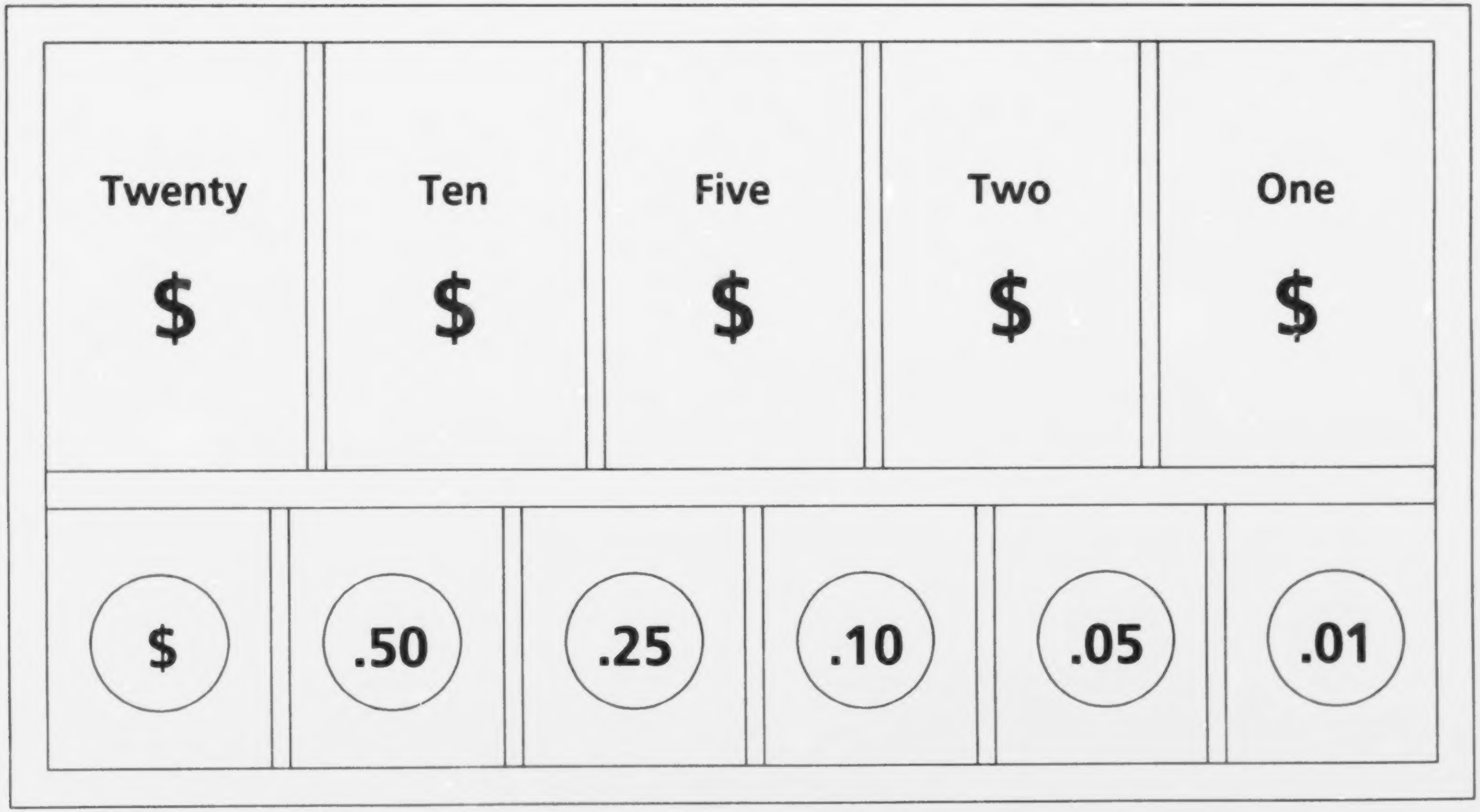
I HEREBY AUTHORIZE ALL REPAIR WORK AS DESCRIBED AND ALL NECESSARY REPLACEMENT OF PARTS. ____________________	CUSTOMER		PHONE	**OFFICE USE ONLY**
	ADDRESS		CALL WHEN READY AM PM	
PARTS	MAKE	MODEL	ODOMETER	
	TIME RECEIVED	TIME PROMISED	WRITTEN BY	
	LICENSE NO.	SERIAL NO.	DATE	
	JOB DESCRIPTION			**LABOUR**

GAS, OIL, GREASE		TOTAL LABOUR	
		TOTAL PARTS	
		GAS, OIL, GREASE	
		OTHER	
TOTAL		TOTAL AMOUNT	

ALL ALTA SERVICE
1986 – 88 Street
Somewhere, Alberta
T4A 5W8

Telephone: 000-0000

Change Bank


Twenty
$
Ten
$
Five
$
Two
$
One
$
$
.50
.25
.10
.05
.01

CASH HANDLING PROCEDURES GUIDE

Job shadow a cashier in a local business. Record your observations of the procedures used and indicate why you think they are/are not effective.

Name of Business: ____________________ Job Shadowing Date: ____________

Student's Name: ________________________

PROCEDURES	APPROPRIATENESS
e.g., making change	Good procedure. Change was counted out and then counted again as it was handed to the customer.

7. VISUAL SKILLS

The ability to use visual skills (e.g., observation, identification, recognition) and the related skill of interpretation are:

- **essential to the maintenance of safety in the workplace and in society**
- **necessary to the monitoring and maintaining of order and sequence in the home, the school and the workplace**
- **important to the creative dimension of many occupations.**

Charts and graphs are used to communicate information in an easy-to-read format.

The concepts, skills and attitudes developed in this unit include:

1. Interprets occupation-related signs and symbols
2. Interprets charts and graphs and describes their purpose
3. Creates/designs a visual representation of a project or process.

STUDENT RESOURCE

- *Working: Today and Tomorrow* (Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

Correlation of Learning Objectives with Student Resource

Concepts, Skills and Attitudes	*Working: Today and Tomorrow*
1. Visual Skills	Graphic representations (e.g., charts, graphs, illustrations) are contained throughout the text.

TEACHER RESOURCES

- Resource 57, "Occupational Health and Safety: WHMIS"
- Resource 58, "Safety Marks"
- Resource 59, "Signs and Symbols Record Chart"
- Resource 60, "Locally Developed Signs and Symbols"
- Resource 61, "Input, Process, Output Model"
- Resource 62, "Types of Charts and Graphs"
- Resource 63, "Problem-Solving/Decision-Making Model
- Community partners.

E = Elective Component

1. SIGNS AND SYMBOLS

Signs and symbols are frequently used in both the workplace and society to convey important information. Many commonly used symbols are used internationally. Learning an international symbol system reduces the need to speak, read or understand a foreign language in order to handle or use certain equipment, tools, materials or systems.

International symbols are used for:
- road signs
- hazardous products
- clothes cleaning instructions
- traffic control.

Other signs and symbols may be locally designed and used in workplaces.

In occupational courses where hazardous materials (e.g., chemicals, gases, flammable liquids, explosives, corrosives) are commonly used students must be able to recognize the nature of these materials from their symbols and handle them properly.

Suggested Activities/Community Partnerships

1. a. Read Resource 57, "Occupational Health and Safety: WHMIS" and Resource 58, "Safety Marks"

   b. Discuss:
      - Why are visual skills important when using the WHMIS?
      - Which products used in the lab/workplace have a WHMIS label? What does each of these labels tell you?

   c. Using Resource 59, "Signs and Symbols Record Chart", to identify and record the hazardous materials used and stored in the school lab or workplace.

   d. Describe the storage area of each hazardous product.

2. Visit workplaces and identify, describe and record signs and symbols in use. Use Resource 60, "Locally Developed Signs and Symbols", to record any signs and symbols not internationally recognized.

3. Invite community partners to discuss the use of signs and symbols in the workplace. Guests may include representatives from:
   - Alberta Consumer and Corporate Affairs
   - Alberta Occupational Health and Safety
   - Workers' Compensation Board
   - Fire department
   - Labour unions
   - Transport Canada.

2. CHARTS AND GRAPHS
3. VISUAL REPRESENTATIONS

Charts and graphs may be used to provide information about:

- trends (e.g., employment, weather, wages)
- sequence (e.g., tasks, events, activities)
- direction (e.g., communication flow, assembly)
- content (e.g., recipes, formulae, fares, taxes).

Almost any job can be represented as a series of tasks. Students should be encouraged to:

- follow the sequence of tasks as presented in job sheet procedures
- suggest alternative sequences (e.g., shortcuts, improvements)
- plan a project individually and/or cooperatively using visual representations to outline the input, process, output stages of the project, including:
  - jobs to do
  - tasks involved in each job
  - responsible person(s) for each job/task
  - time lines
  - costs
  - checkpoints and evaluation procedures during and at the completion of the project.

Resource 61, "Input, Process, Output Model", may be used as a basis for project planning activities.

Suggested Activities/Community Partnerships

1. Study Resource 62, "Types of Charts and Graphs", and discuss the following questions with classmates and community partners:

   a. Which types of charts and graphs are used in course-related work? Describe examples used or observed.

   b. Which type of chart or graph is easiest to understand and interpret? Why?

   c. Which type of chart or graph is more difficult to understand and interpret? Why?

2. Chart and graph each of the following situations using a distinct graph for each activity:

   a. the amount of time you spend studying each day, over the period of one week

   b. the amount of money you earn each day, over the period of one calendar month (e.g., January 1-31)

   c. the marks you receive during a one month period in each of your courses.

   Show and explain each of your charts and graphs to classmates.

3. Use Resource 63, "Problem-Solving/Decision-Making Model", to describe in writing how you made a recent decision or solved a recent problem.

4. a. Discuss:
   - "What is a flow chart?"
   - "What is the purpose of a flow chart?"

   b. Brainstorm: "In what ways can a flow chart be used in course-related work?"

   c. Draw a flow chart to show the sequence of tasks you are following in a current project.

5. a. In cooperation with a community partner, design and produce a project that may be useful to others. Projects may include:
   - making a sign or symbol poster
   - craft work
   - construction design
   - volunteer work plan
   - advertising or marketing plan
   - window display
   - child care project
   - senior citizen assistance project.

   b. Construct a chart that may be used to evaluate the finished product or service. (Evaluation charts provided in the student workbook may be used as a guide or use the evaluation guide presented in Suggested Teaching Strategies, "Writing Directions".)

Occupational
Health & Safety
WHMIS

WORKPLACE HAZARD MATERIALS INFORMATION SYSTEM

WHAT IS WHMIS?
WHAT PROBLEMS IS WHMIS TRYING TO SOLVE?
HOW WILL WHMIS AFFECT YOU?
WHMIS LEGISLATION
EXEMPTIONS
ENFORCEMENT OF WHMIS LEGISLATIVE REQUIREMENTS
PENALTIES
RESOURCES
OBTAINING LEGISLATION AND REGULATIONS
ATTACHMENT 1 - HAZARD SYMBOLS
ATTACHMENT 2 - SUPPLIER LABEL - A MODEL
ATTACHMENT 3 - SUPPLIER LABEL - AN EXAMPLE
ATTACHMENT 4 - INFORMATION TO BE DISCLOSED ON A MATERIAL SAFETY DATA SHEET

Revised 1989 04 14

Workplace
Hazardous Materials
Information System

OCCUPATIONAL HEALTH AND SAFETY

WHAT IS WHMIS?

WHMIS is the Workplace Hazardous Materials Information System. It:

- is a Canada-wide hazard communication system for transmitting information about hazardous materials used at Canadian workplaces.
- has three key elements:
    - labels
    - material safety data sheets (MSDSs), and
    - worker education/instruction programs.
- requires that Canadian suppliers, including importers, of hazardous materials, provide hazard information, in the form of labels and MSDSs, to their Canadian workplace customers, **as a condition of sale**.
- requires employers to provide worker education, so that workers can apply the information to protect their health and safety.
- allows valid, confidential business information to be withheld from disclosure.

WHAT PROBLEMS IS WHMIS TRYING TO SOLVE?

- Unlabelled chemicals at work sites.
- Inadequate information provided by suppliers to employers and workers respecting the identity and hazardous properties of materials used at work sites and the precautions to be taken when handling those materials.
- Lack of awareness by employers and workers about the materials they are using, which results in improper use of hazardous materials at work sites.
- Potential adverse consequences of inconsistent requirements between Canadian jurisdictions.

HOW WILL WHMIS AFFECT YOU?

- All users, from janitorial services to major chemical manufacturers, will benefit from the availability of health and safety information of a higher quality, and on more products, than are currently in circulation.
- Compliance with existing occupational health and safety requirements will be easier for most work sites because materials are labelled and MSDSs are supplied with products as they are purchased.

- Supplier industries across Canada will have uniform standards to meet.

- Workers' compensation costs will be reduced as workers' exposures to hazardous chemicals and accidents involving chemicals decline.

- Health care costs for treatment of conditions related to worker exposure to hazardous chemicals, including long-term degenerative diseases (e.g., liver, kidney, and central nervous system disorders; cancers) will be reduced.

EXEMPTIONS

Not all materials meeting the criteria for controlled products are covered by WHMIS.

PARTIALLY EXEMPTED PRODUCTS

Some controlled products are exempted from the **supplier aspects** of WHMIS (supplier labels and MSDSs) because they are regulated by other legislation. These are:

- Explosives (*Explosive Act*)
- Cosmetics, foods, drugs and devices (*Food and Drug Act*)
- Pesticides (*Pest Control Products Act*)
- Radioactive materials (*Atomic Energy Control Act*)
- Consumer products

Employer and worker aspects of WHMIS apply to these products when used at work sites, even though supplier aspects do not apply. Work site labels must be applied to these products if the original label has been destroyed or removed, or the product is transferred from the original supplier container to another container. As well, worker education is required for these products.

TOTALLY EXEMPTED PRODUCTS

Some controlled products are exempted from all aspects of WHMIS. These are:

- Wood and products made of wood
- Tobacco and products made of tobacco
- Manufactured articles (**i.e., an article which is formed into a specific shape or design, and the intended use depends in whole or in part on that design, and under normal conditions of use the article will not release or otherwise cause a worker to be exposed to a controlled product)**
- In-house generated hazardous waste (**i.e., controlled products intended for disposal or sold for recycling or recovery)**
- Products covered by Transportation of Dangerous Goods (TDG) legislation

Controlled products are not subject to WHMIS information requirements while they are covered by TDG legislation. In many cases, WHMIS labels, MSDSs and other information will accompany these shipments. However, WHMIS requirements apply only at points of sale and at work sites where such products are manufactured, used, handled or stored.

Even though these materials are exempt from WHMIS requirements, they may be regulated as "harmful substances" under Part 1 of the Alberta *Chemical Hazards Regulation* (AR 393/88). In such cases, employers are required to clearly identify the harmful substance, provide training regarding the harmful substance and ensure safe storage and handling of the harmful substance.

ENFORCEMENT OF WHMIS LEGISLATIVE REQUIREMENTS

- Enforcement will be undertaken by existing staff of Alberta Occupational Health and Safety. There will be no new inspectorate.
- An information-sharing, problem-solving approach will be taken.

FEDERAL (SUPPLIER) ASPECTS

- Enforcement of the supplier requirements will be undertaken on a consistent, national basis. Problems will be referred between jurisdictions as required.
- Selected staff of Alberta Occupational Health and Safety will be appointed under the authority of the (federal) *Hazardous Products Act* to enforce the supplier aspects of WHMIS. These officers have specialized knowledge in dealing with chemical hazards and have received extensive training in WHMIS.
- Investigations of complaints will be undertaken on a priority basis (e.g., customer is not satisfied that supplier is meeting the WHMIS requirements).
- Situations of non-compliance will be addressed as follows:
  - The supplier will be advised of requirements and areas needing improvement. A schedule for making corrections will be established according to the severity of the violation.

If the supplier has not complied with the requirements of the *Hazardous Products Act*, employers have the option of not accepting the shipment.

  - Orders will be issued under the authority of the *Hazardous Products Act* if non-compliance continues.
  - Non-compliance with an order could result in seizure of goods or prohibition of sale of the controlled product to workplaces in Canada.
  - Prosecution will be considered in cases of flagrant or persistent violations of the Act. This prosecution could result in a fine or imprisonment.

PROVINCIAL (WORK SITE/EMPLOYER/WORKER) ASPECTS

- The Field Operations staff of Alberta Occupational Health and Safety will enforce the user (work site) aspects of WHMIS. These staff have received training in the WHMIS requirements for work site parties, and will be assisted by specialist staff who can advise on any questions regarding the adequacy of labels, MSDSs and worker education.

- Investigations of complaints will be undertaken on a priority basis.
- Compliance with WHMIS requirements will be evaluated in all cases where an Occupational Health and Safety Officer is investigating a chemical hazard or the use of a hazardous material.
- Compliance with WHMIS requirements will also be evaluated on the basis of a "target of opportunity", when the officer is at a work site for another reason.
- Occupational Health and Safety Officers will also provide basic informational materials on WHMIS to work site personnel.
- Complex issues needing interjurisdictional resolution to maintain the Canada-wide uniformity of WHMIS will be referred to the interjurisdictional coordinating committee for discussion at a national level.
- Situations of non-compliance will be addressed as follows:
  - The employer will be advised of the requirements of areas needing improvement. The employer will be given a specific period of time for complying.

Cases of imminent danger are an exception to this procedure. Employers will be given orders to take immediate measures to protect workers. Consultation and advice will be given where needed or requested.

  - Orders will be issued under the authority of the Alberta *Occupational Health and Safety Act* if non-compliance continues.
  - Non-compliance with an order could result in shut-down of an operation, prohibition of use of certain products, etc.
  - Prosecution will be considered in cases of flagrant or persistent violation. Prosecution could result in a penalty (fine or imprisonment) being levied by the court.
  - This procedure is consistent with present practise for other violations of the *Occupational Health and Safety Act*.

PENALTIES

The following are the maximum penalties for violations of WHMIS requirements:

FEDERAL (SUPPLIER) ASPECTS

- Violations of the *Hazardous Product Act* or its regulations:
  - Summary conviction: $100,000 or 6 months imprisonment, or both.
  - Indictment: $1,000,000 or 2 years imprisonment, or both.
  - Officers of the company who participate in the offence are liable.

ALBERTA USER: WORK SITE/EMPLOYER/WORKER ASPECTS

- Violations of the *Occupational Health and Safety Act* or its regulations:
    - First offence:
        - $15,000 fine and, in the case of a continuing offence, $1,000 for each day that the offence continues, or
        - 12 months imprisonment, or
        - both fine and imprisonment.
    - Second and subsequent offences:
        - $30,000 fine and, in the case of a continuing offence, $2,000 for each day that the offence continues, or
        - 12 months imprisonment, or
        - both fine and imprisonment.

An amendment to the *Occupational Health and Safety Act* was passed July 6, 1988. When promulgated, this amendment will increase the maximum fines ten fold.

OBTAINING LEGISLATION AND REGULATIONS

FEDERAL

The *Hazardous Products Act* and the *Controlled Products Regulations* and the *Ingredient Disclosure List*, as well as the *Hazardous Materials Information Review Act* and the *Hazardous Materials Information Review Regulations*, are available from federal government publication outlets. In Alberta, these are:

Banff
Banff Book & Art Den
110 Banff Avenue
T0L 0C0
(403) 762-3919

Calgary
Carmen Moore Book Orders Ltd
1578 - 7 Avenue S.W.
T2R 1N5

De Mille Technical Books Ltd
918 - 6 Avenue S.W.
T2P 0V5

Mount Royal College Bookstore
4825 Richard Road S.W.
T3E 6K6
(403) 240-6300

University of Calgary Bookstore
2920 - 24 Avenue N.W.
T2N 1N4

Edmonton
Audrey's Books Ltd
10702 Jasper Avenue
T5J 3J5
(403) 423-3487

University of Alberta Bookstore
The New Student Union Building
T6G 2J7
(403) 432-4215

Jasper
Jasper Camera & Gifts Ltd
P.O. Box 70
T0E 1E0
(403) 852-3165

Lethbridge
House of Books
319 - 8 Street S.
T1J 3M4

University of Lethbridge Book Store
4401 University Drive
T1K 3M4

Medicine Hat
The Bookshop
Arcade Mall
435A - 3 Street S.E.
T1A 7G2
(403) 527-7055

Red Deer
Severna Nash Books Ltd
4926 - 49 Street
T4N 1V3
(403) 437-6744

St. Albert
Book Order Service of Canada
7 Perron Street
T8N 1E3
(403) 458-3155

National
Canadian Government Publishing Centre
Supply and Services Canada
Ottawa, Ontario
K1A 0S9
(819) 997-2560

OBTAINING LEGISLATION AND REGULATIONS (cont'd)

ALBERTA

The *Alberta Occupational Health and Safety Act* and regulations (including the *Chemical Hazards Regulation*, AR 393/88) are available from:

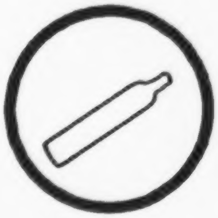
Edmonton
Publication Services
Government of Alberta
11510 Kingsway Avenue
T5G 2Y5
(403) 427-4952

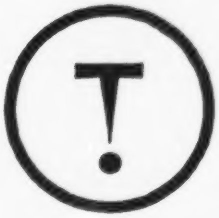
Calgary
Publication
Government of Alberta
Main Floor, 455 - 6 Street S.W.
T2P 4E8
(403) 297-6251

Attachment 1

HAZARD SYMBOLS

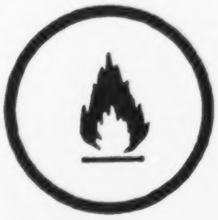
CLASS A:
Compressed gas

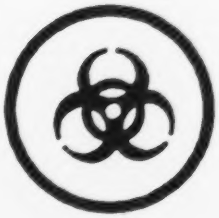




CLASS D:
2. Materials causing other toxic effects

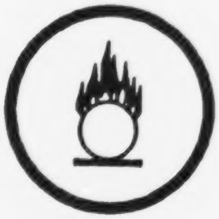
CLASS B:
Flammable and combustible materials

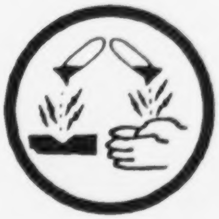




CLASS D:
3. Biohazardous infectious materials

CLASS C:
Oxidizing materials

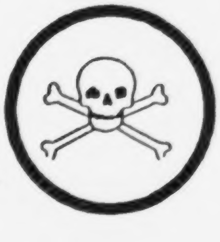


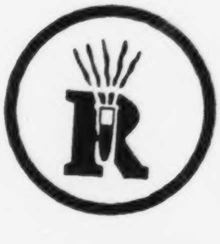


CLASS E:
Corrosive materials

CLASS D:
Poisonous and infectious materials

1. Materials causing immediate and serious toxic effect

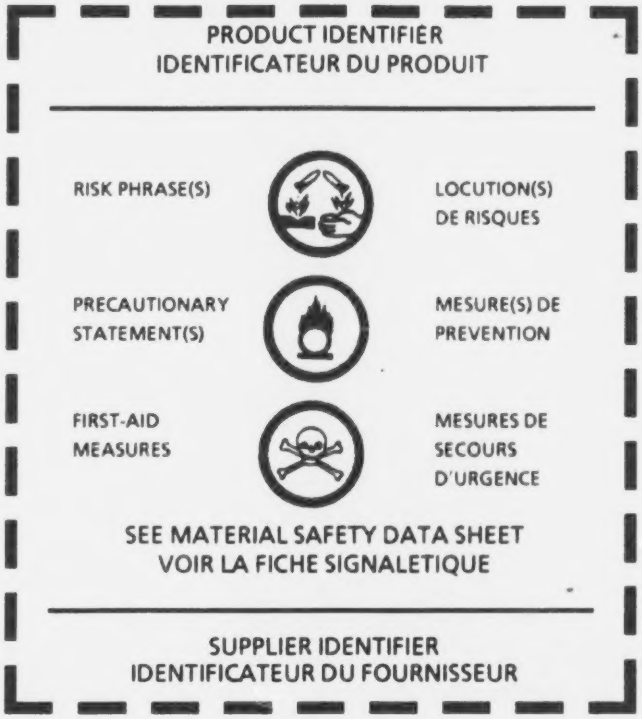




CLASS F:
Dangerously reactive materials

Attachment 2

SUPPLIER LABEL
A MODEL


PRODUCT IDENTIFIER
IDENTIFICATEUR DU PRODUIT
RISK PHRASE(S)
LOCUTION(S) DE RISQUES
PRECAUTIONARY STATEMENT(S)
MESURE(S) DE PREVENTION
FIRST-AID MEASURES
MESURES DE SECOURS D'URGENCE
SEE MATERIAL SAFETY DATA SHEET
VOIR LA FICHE SIGNALETIQUE
SUPPLIER IDENTIFIER
IDENTIFICATEUR DU FOURNISSEUR

1. The **PRODUCT IDENTIFIER** (Name of product)
2. The **SUPPLIER IDENTIFIER** (Name and location of supplier)
3. **RISK PHRASES**, to alert the handler to any hazards associated with the product
4. **PRECAUTIONARY MEASURES** for the safe use, handling and storage of the product
5. **FIRST AID MEASURES** which describe what to do in case of an acute overexposure to the product
6. **WHMIS HAZARD SYMBOLS**, which give a visual indication of the major hazards of the material
7. **REFERENCE TO THE MSDS** for further information

TOLUENE

RISK PHRASES

FLAMMABLE AND TOXIC

Eye, lung and skin irritant.

Danger of serious damage to health by prolonged exposure.

Vapour may travel long distances.

PRECAUTIONARY MEASURES

Keep away from sources of ignition—no smoking.

Container must be grounded when removing contents.

Keep container closed.

Do not breathe vapour.

Use with enough ventilation to keep below the applicable exposure limit.

Avoid contact with eyes and skin.

Wear chemical goggles and viton or viton/neoprene gloves.

Wash thoroughly after handling.

FIRST AID

If affected by vapour, move to fresh air.

If breathing has stopped, apply artificial respiration.

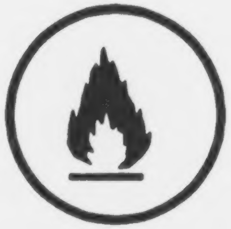
In case of eye contact with liquid, flush with plenty of water for 15 minutes.

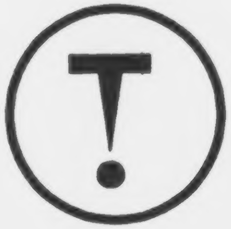
GET MEDICAL ATTENTION.

In case of skin contact, wash with soap and water.

If swallowed, DO NOT INDUCE VOMITING.

GET MEDICAL ATTENTION.





MENTIONS DE RISQUE

INFLAMMABLE ET TOXIQUE

Irritant pour les yeux, les poumons, et la peau.

L'exposition prolongée risque d'entrainer de graves dommages à la santé.

Les vapeurs peuvent sétendre sur de longues distances.

PRÉCAUTIONS

Tenir à l'écart des flammes et des étincelles—ne pas fumer. Brancher le contenant à une prise de terre en vidant le contenu. Tenir le contenant fermé. Éviter derespirer les vapeurs. Aérer suffisamment pour maintenir le seuil toxicité suggéré. Éviter le contact avec les yeux et la peau. Porter les lunettes de sécurité et les gants de vitonou viton/néoprène.Laver à fond.

PREMIERS SOINS

Placer la victime au grande air, si indisposé par les vapeurs. Si la respiration est interrompue, recourir à la respiration artificielle. En cas de contact avec les yeux, laver avec beaucoup de l'eau pendant au moins de 15 minutes. OBTENIR DES SOINS MÉDICAUX. En cas de contact avec la peau, laver avec de l'eau et du savon la region exposée. Si avalé, NE PAS PROVOQUER DE VOMISSEMENT. OBTENIR DES SOINS MÉDICAUX.

SEE MATERIAL SAFETY DATA SHEET

VOIR FICHE SIGNALETIQUE

ABC CHEMICAL COMPANY
123 SAMPLE ROAD, TESTVILLE AB1 C2D

Attachment 3

INFORMATION TO BE DISCLOSED ON A MATERIAL SAFETY DATA SHEET

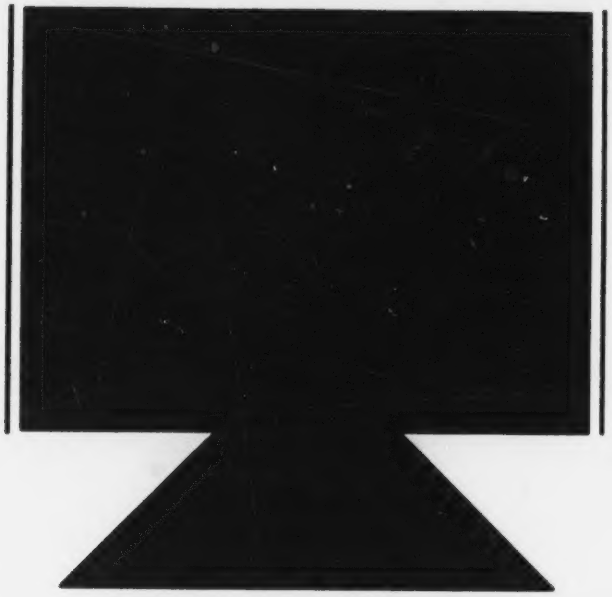
NOTE: The design of a Material Safety Data Sheet is 'performance' based. That is, the supplier or employer may adopt any design or order for the information so long as the nine categories of information listed in the left column below are included and completed. No category may be left blank, although 'not applicable' or similar wording may be used, if appropriate. The right column identifies specific information which would normally be included in the category, if the information is available, and is applicable to the Controlled Product.

CATEGORY	INFORMATION ABOUT CONTROLLED PRODUCTS
1. Product Information	(1) Product identifier (2) Product use (3) Manufacturer's name, street address, city, province, postal code and emergency telephone number (4) Supplier identifier, the supplier's street address, city, province, postal code and emergency telephone number
2. Hazardous Ingredients	(1) Hazardous Ingredients: – where the controlled product is a pure substance, the chemical identity of the controlled product – where the controlled product is not a pure substance, the chemical identity of any ingredient that is a controlled product and the concentration of that ingredient – where the controlled product contains an ingredient that is included in the Ingredient Disclosure List and the ingredient is in a concentration that is equal to or greater than the concentration specified in the Ingredient Disclosure List for that ingredient, the chemical identity and concentration of the ingredient – the chemical identity of any ingredient that the supplier has reasonable grounds to believe may be harmful to any person, and the concentration of that ingredient – the chemical identity of any ingredient of which the toxicological properties are not known to the supplier and the concentration of that ingredient. (2) CAS registry number and product identification number (3) LD50 (species and route) (4) LC50 (species and route)
3. Physical Data	(1) Physical state (i.e., gas, liquid, solid) (2) Odour and appearance (3) Odour threshold (4) Specific gravity (5) Vapour pressure (6) Vapour density (7) Evaporation rate (8) Boiling point (9) Freezing point (10) pH (11) Coefficient of water/oil distribution.

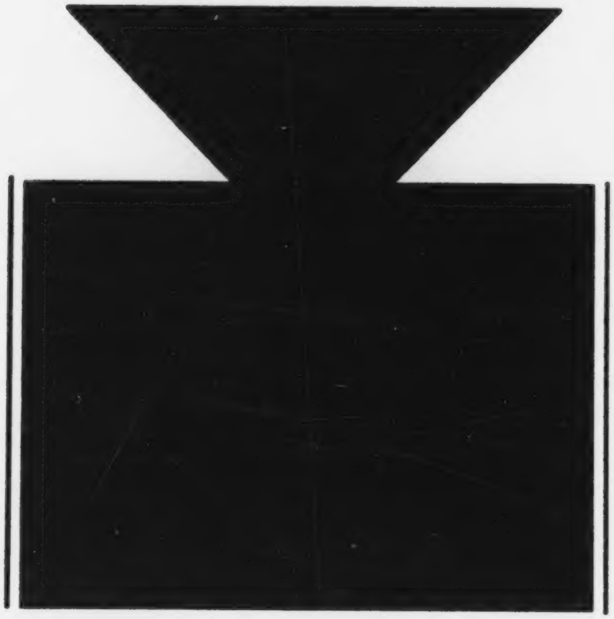
INFORMATION TO BE DISCLOSED ON A MATERIAL SAFETY DATA SHEET (Cont'd)

CATEGORY	INFORMATION ABOUT CONTROLLED PRODUCTS
4. **Fire or Explosion Hazard**	(1) Conditions of flammability (2) Means of extinction (3) Flash point and method of determination (4) Upper flammable limit (5) Lower flammable limit (6) Auto-ignition temperature (7) Hazardous combustion products (8) Explosion data—sensitivity to mechanical impact (9) Explosion data—sensitivity to static discharge
5. **Reactivity Data**	(1) Conditions under which the product is chemically unstable (2) Name of any substance or class of substance with which the product is incompatible (3) Conditions of reactivity (4) Hazardous decomposition products
6. **Toxicological Properties**	(1) Route of entry, including inhalation, skin contact, skin absorption, eye contact and ingestion (2) Effects of acute exposure to product (3) Effects of chronic exposure to product (4) Exposure limits (5) Irritancy of product (6) Sensitization to product (7) Carcinogenicity (8) Reproductive toxicity (9) Teratogenicity (10) Mutagenicity (11) Names of toxicologically synergistic products
7. **Preventive Measures**	(1) Specific engineering controls to be used (2) Personal protective equipment to be used (3) Procedures to be followed in case of leak or spill (4) Waste disposal (5) Handling procedure and equipment (6) Special shipping information (7) Storage requirements
8. **First Aid**	(1) Specific first aid measures related to acute exposure
9. **Preparation Information**	(1) Name and telephone number of the group, department or party responsible for the preparation of the MSDS (2) Date of preparation of the MSDS

For permission to reprint copyright material acknowledgement is made to Alberta Occupational Health and Safety.



SAFETY MARKS



The Transportation of Dangerous Goods Act and Regulations are designed to reduce the public risk when dangerous goods are transported in Canada. The regulations establish safety standards for handling, offering for transport and transporting dangerous goods, and provide mechanisms for communicating the degree and the nature of the danger.

The legislation is the result of a cooperative effort. Complementary federal and provincial and territorial legislation, developed in consultation with industry, was enacted to consolidate a number of previously uncoordinated and separately administered federal acts and regulations.

As a consequence, shipping requirements are now more uniform and consistent across the country and apply to all types of dangerous goods and to all means of transport.

This brochure provides general information on the responsibility of consignors to properly identify consignments of dangerous goods with the correct safety marks.

WHAT ARE SAFETY MARKS?

Safety marks are used to indicate the presence of dangerous goods and to identify the type and degree of risk they represent. They are displayed on containers, packages, tanks and cylinders and on transport units.

There are four groups of safety marks: labels, placards, signs and other safety marks.

Labels are used on packages, cylinders and small containers while placards are used on large containers and transport units. Both are of a standard square-on-point shape (diamond-like) and must be manufactured in accordance with the regulations. There are also special labels and placards for use in certain situations, such as "Magnetized Material", "Cargo Aircraft only", "Empty", "Polychlorinated biphenyls", "This side up" labels, and the "Danger" placard.

Two signs, for "Fumigation" and "Oxygen depletion", must be used under prescribed conditions to indicate the specific risk involved.

Other safety marks are not necessarily symbols but additional information which may be required. For example, the shipping name and the product identification number must appear on a small container or package. In some cases, additional information may be required, such as a control temperature and/or the flash point of a flammable substance.

APPLICATION

Safety marks regulations (Part V) apply to all consignments of dangerous goods unless otherwise specified in Part V, in Special Provisions (Schedule III) or in Application (Part II) of the regulations.

Consignors must also comply with the requirements for safety marks of the **Transport Packaging of Radioactive Materials Regulations** when transporting dangerous goods of Class 7—Radioactive materials.

Consignor Responsibilities

Consignors are responsible for displaying safety marks required by the regulations and for providing the initial carrier with placard(s) and orange panels (if any) that are required. The placards or panels must bear the appropriate product identification number (when applicable) and any other information required by the regulations for large containers or transport units. If a safety mark is defaced, lost or stolen while the dangerous goods are in the custody or control of the consignor, it must be replaced.

All safety marks must comply with the requirements set out in Part V of the regulations. Safety marks must be clearly visible, of the required colour, and manufactured to withstand the conditions to which they will be exposed.

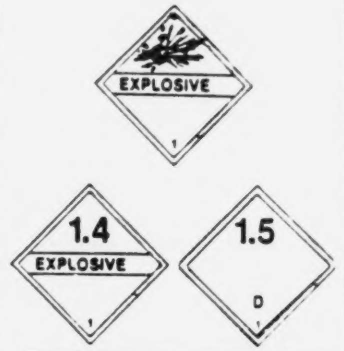
Labels

Labels indicate the primary classification of dangerous goods and, in some cases, any subsidiary classifications. Unless otherwise specified, they must be applied to every small container, package and cylinder that contains dangerous goods and is to be offered for transport. (They need not be applied to inner receptacles in packages.)

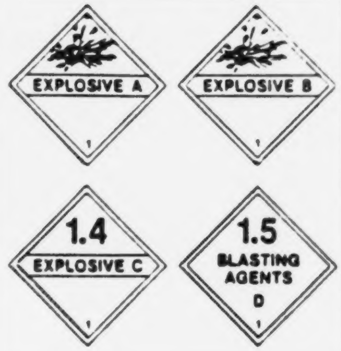
Specific dimensions are outlined in Sections 5.8 and 5.9 of the regulations and they are graphically displayed in Part 1 of Schedule V. Subsidiary labels (when required) are the same for each class or class and division as shown in Schedule V, except that the class number is not shown.

Samples

Class 1 – Explosives

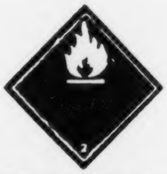


Explosives—transborder consignments

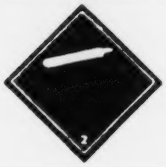


Class 2 – Gasses

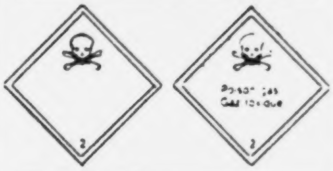
2.1 Flammable Gas



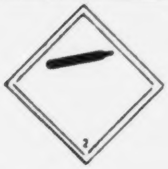
2.2 Non-Flammable, Non-Poisonous, Non-Corrosive



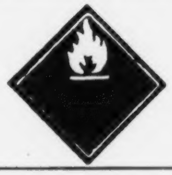
2.3 Poisonous Gas


2
Poison gas
Gaz toxique
2

2.4 Corrosive Gas

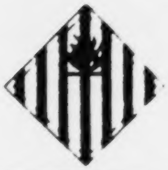


Class 3 – Flammable liquids

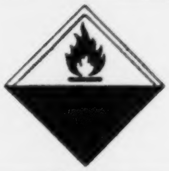


Class 4

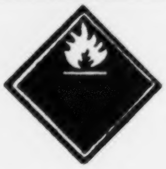
4.1 Flammable Solids



4.2 Spontaneously Combustible

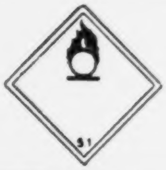


4.3 On contact with water, emits flammable gasses

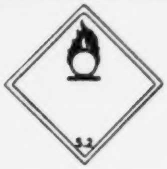


Class 5

5.1 Oxidizers



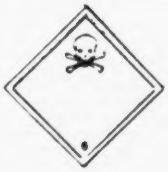
5.2 Organic Peroxides



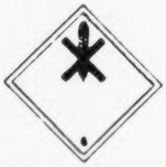
Class 6

6.1 Poisonous Substances

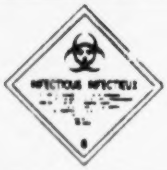
(Packing Groups I & II)



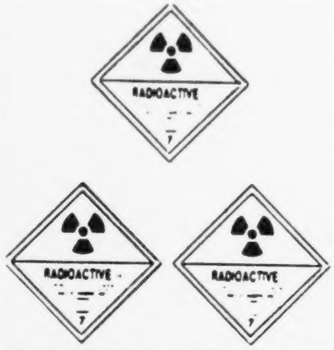
(Packing Group III)



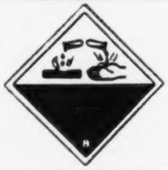
6.2 Infectious Substances


INFECTIOUS INFECTIEUX
6

Class 7 – Radioactive Materials

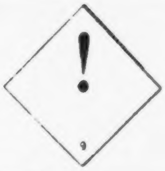

RADIOACTIVE
7
RADIOACTIVE
7
RADIOACTIVE
7

Class 8 – Corrosive Materials



Class 9 – Miscellaneous Products or Substances

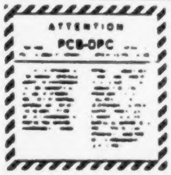
9.1 Miscellaneous Dangerous Goods



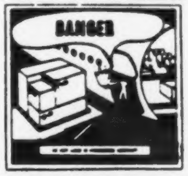
Special Labels

Magnetized materials that have the PIN 2807 and are to be transported by air

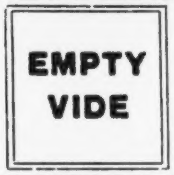
Polychlorinated biphenyls



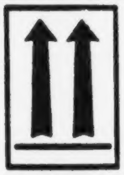
Prohibited from being transported by passenger aircraft



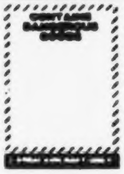
Empty but not cleaned or purged



Package orientation



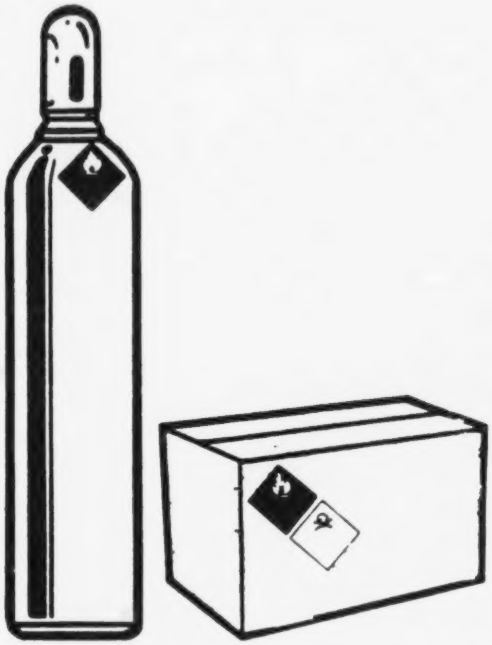
Unit Load Device



Sample

Labels are placed on a side of a package other than the one on which it rests or is stacked during transport. If placed on a package greater than 2 m^3, labels must appear on two opposite sides of the package, other than the side it rests upon or is intended to be stacked during transport. On cylinders, the safety marks must appear on the shoulder. When a package or cylinder has a dimension of less than 200 mm, the label size may be reduced or the label may be affixed to a tag as specified in Section 5.9. Labels for subsidiary risk, if required, are placed to the right of and adjacent to the label for primary risk or to the right, adjacent and below the label for primary risk. Any subsequent labels that are required must appear to the right, adjacent to and beside or below the label(s) for primary and, when required, subsidiary classification.

Labels are required on overpacks if the labels on small containers are not visible through the overpack.

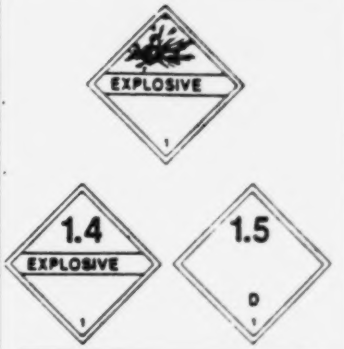


Placards

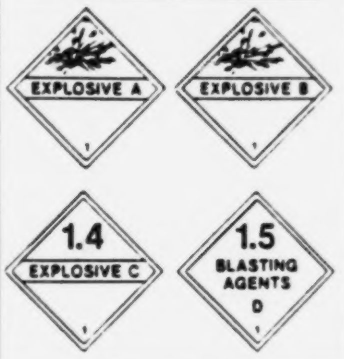
Placards identify the primary and, where applicable, the subsidiary classification of dangerous goods by colour, symbol and in some cases product identification number. Specific dimensions and instructions on surface, size and lettering are found in Part V Sections 5.17, 5.23 and 5.25 and they are graphically displayed in Part II of Schedule V.

Samples

Class 1 – Explosives

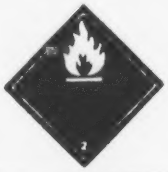

EXPLOSIVE
1
1.4
EXPLOSIVE
1
1.5
D
1

Explosives—transborder consignments

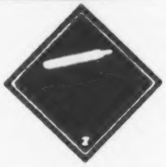

EXPLOSIVE A
1
EXPLOSIVE B
1
1.4
EXPLOSIVE C
1
1.5
BLASTING AGENTS
D
1

Class 2 – Gasses

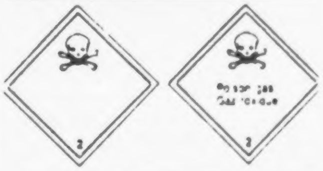
2.1 Flammable Gas



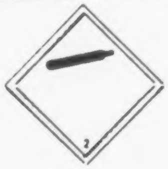
2.2 Non-Flammable, Non-Poisonous, Non-Corrosive



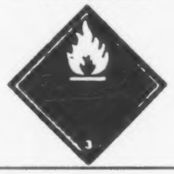
2.3 Poisonous Gas



2.4 Corrosive Gas

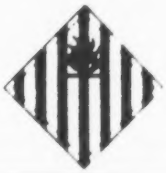


Class 3 – Flammable liquids

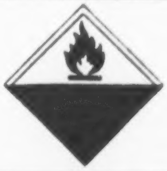


Class 4

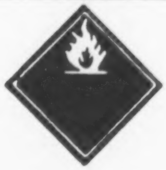
4.1 Flammable Solids



4.2 Spontaneously Combustible

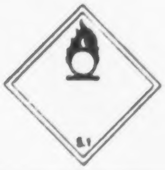


4.3 On contact with water, emits flammable gasses

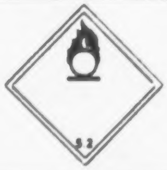


Class 5

5.1 Oxidizers



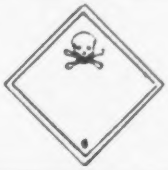
5.2 Organic Peroxides



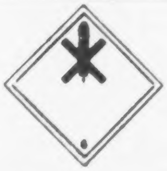
Class 6

6.1 Poisonous Substances

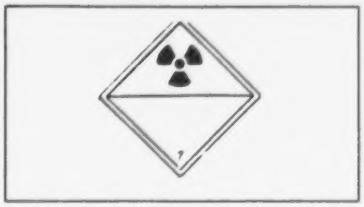
(Packing Groups I & II)



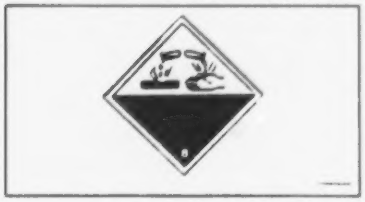
Harmful (Packing Group III)



Class 7 – Radioactive Materials



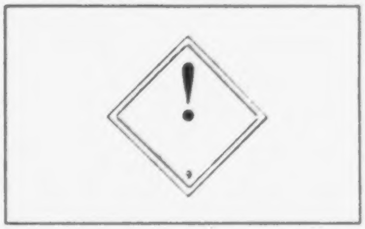
Class 8 – Corrosive Materials



Class 9 – Miscellaneous Products or Substances

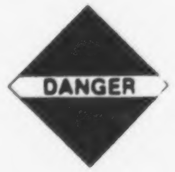
9.1 Miscellaneous Dangerous Goods

9.3 Dangerous Wastes

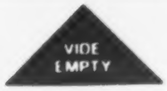


Special Placards

Mixed load other than
- cyanogen chloride (PIN 1589)
- hydrogen cyanide anhydrous (PIN 1051)
- nitric oxide (PIN 1660)
- nitrogen dioxide liquefied (PIN 1067)
- phosgene (PIN 1076)
- phosphine (PIN 2199)
- explosives
- organic peroxides
- poisonous gases
- corrosive gasses
- radioactive materials

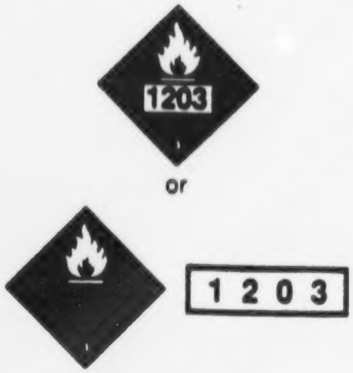


Empty, but not cleaned or purged (for rail tank cars only)



Background requirements for Placards

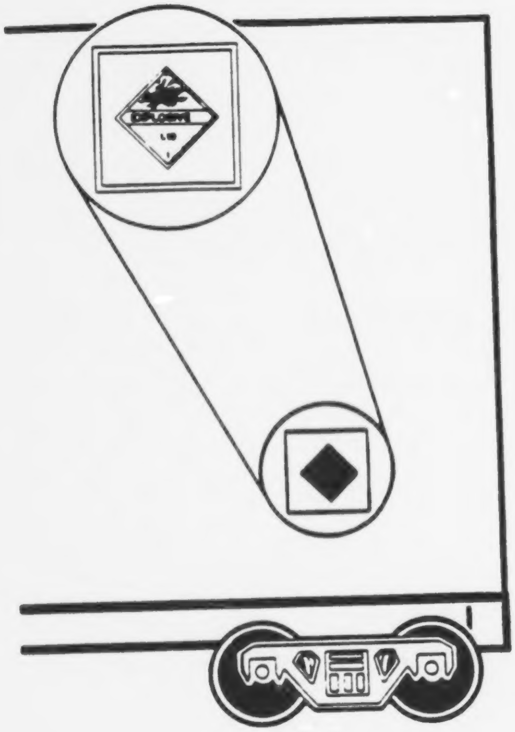
A white, square background is required for placards for rail shipments of Class 1.1; Class 1.2; cyanogen chloride (PIN 1589); hydrogen cyanide, anhydrous (PIN 1051); nitric oxide (PIN 1660); nitrogen dioxide, liquefied (PIN 1067); phosgene (PIN 1076); or phosphine (PIN 2199).



Product identification Number

Dangerous goods that are in bulk or that have the same product identification number and are in carload, trailerload, truckload or containerload must display the product identification number on the placard or adjacent to the placard on an orange panel. For cyanogen chloride (PIN 1589); hydrogen cyanide, anhydrous (PIN 1051); nitric oxide (PIN 1660); phosgene (PIN 1076) or nitrogen dioxide, liquefied (PIN 1067) transported in a large container or transport unit, the product identification number cannot be on the placard but must be displayed on the orange panel adjacent to the placard.

The display of the product identification number, however, does not apply to Class 1 Explosives for RAIL or ROAD transport or to Class 2.3 (other than those products mentioned above); Class 7 or Class 9 if the consignment is by RAIL.



Retro-reflectivity

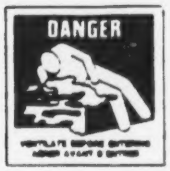
For Class 1 Explosives (except Class 1.4), Class 7 (category III) Radioactive materials and most other dangerous goods transported in bulk, the orange panel (when required) and the placard must meet a retro-reflectivity standard (Section 5.27). For those dangerous goods in bulk that are affected, the transport unit may, instead of having a retro-reflective orange panel and /or placard, display a retro-reflective, yellow band as described in Section 5.28 and non retro-reflective orange panels and/or placards.

Location of orange panels and placards

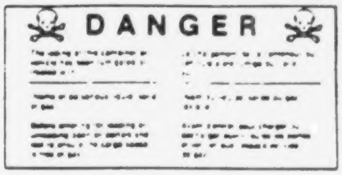
The orange panel and/or placard must be displayed on each side and each end of a large container or transport unit so that they are clearly visible from all sides.

Signs

When a large container or cargo compartment contains a substance that may cause asphyxiation, or when such a substance is located between an inner and outer package, a special sign for oxygen depletion (as specified in Part III of Schedule V) must be displayed on the package or near every opening of the cargo compartment or container through which a person can pass.



When a container or a cargo compartment is to be cleaned, treated or fumigated, the danger sign for fumigation (Figure 2, Part III, Schedule V) must be displayed.

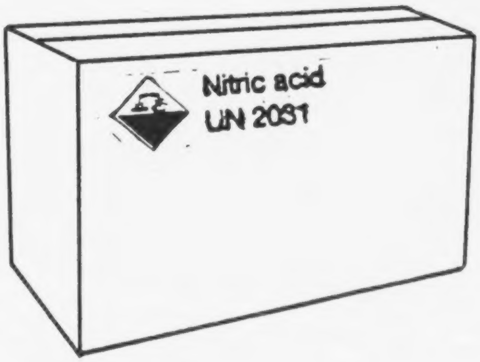


The standards for these signs are set out in Sections 5.34, 5.35 and 5.36 of the regulations.

Other Safety Marks

In addition to labels, placards, orange panels and signs, other safety marks are required. These requirements are set out in Sections 5.37 through 5.43 of the regulations. Other safety marks include:

- the shipping name
- control and emergency temperatures (if applicable)
- the product identification number preceded by the letters PIN, UN or NA
- model or class specific information or instructions.



Tank commodity name/leaking tank

The requirements for these other safety marks apply to road and rail transport (tank commodity name to rail; leaking tank to rail and road). The leaflets for these modes, contained in the shipper's kit, outlines the general requirements. This kit is available from any of the contacts listed at the end of this brochure.

Identification Marks

The owner or lessee of a tank must mark the tank at two opposite sides or ends with his name and address or a self-identifying symbol, acronym or abbreviation* and the serial number, if any, assigned to the tank. (A tank is defined as "a closed large container or a closed cargo compartment designed to carry liquids, gases or solids in bulk.")

The manufacturer or reconditioner of a package, container or tank must mark it with his name and address or a self-identifying symbol, acronym or abbreviation.*

Labelling and Placarding Exemptions

A general information sheet is available on consumer commodities and limited quantities, that outlines general requirements including those for safety marks. This is available from any of the contacts listed at the end of this brochure.

No placards are required on a ROAD vehicle (unless the road vehicle is being transported on a railway vehicle) that contains solely:

- 25 kg or less of explosives being transported from a retail outlet to their place of use or samples of explosives being transported to a test site;
- any quantity of Class 1.4 Explosives with compatibility group S or 1,000 kg or less (not explosive quantity) of Class 1.4 Explosives with any compatibility group except S;
- 500 kg gross or less of:

Class 2.1	Flammable gas
Class 2.2	Non-flammable, non-poisonous gas
Class 3	Flammable liquids
Class 4.1	Flammable solids
Class 4.2	Spontaneously combustible substances
Class 5.1	Oxidizing substances
Class 6.1	Poisonous Substances except hydrogen cyanide, anhydrous (PIN 1051)
Class 8	Corrosive materials

* The Director General of the Transport Dangerous Goods Directorate of Transport Canada must be notified of the self-identifying symbol, acronym or abbreviation.

If any item, however, listed in List II (Dangerous Goods other than Explosives) in Schedule II of the regulations has a letter "E" in Column III, the above exemption does not apply, and the road vehicle must be properly placarded. The letter "E", as indicated in the legend to Schedule II, means the substance is potentially explosive.

As well, no placard is required on a public passenger road vehicle if the vehicle does not contain quantities of dangerous goods that exceed those set out in Column VI (Public Passenger Road Vehicle (kg) of List I (Explosives) or Column VIII (Maximum net quantity per package or prohibition for passenger aircraft and passenger vehicle) in List 1 (Dangerous Goods other than Explosives) in Schedule II of the regulations.

This brochure provides general information only. For specific information, the Act and Regulations must be consulted.

Further information is available from:

Transport Dangerous Goods Directorate
Transport Canada
Ottawa, Ontario
K1A 0N5
Telephone: (613) 992-4624

Regional Manager
Transport Dangerous Goods
Transport Canada
750 Cambie Street, Suite 450
Vancouver, British Columbia
V6B 2P2
Telephone: (604) 666-2955

Regional Manager
Transport Dangerous Goods
Transport Canada
6th Floor, Federal Building
101 - 22nd Street E
Saskatoon, Saskatchewan
S7K 0E2
Telephone: (306) 975-5105

Regional Manager
Transport Dangerous Goods
Transport Canada
391 York Street
Winnipeg, Manitoba
R3C 0P4
Telephone: (204) 949-5969

Regional Manager
Transport Dangerous Goods
Transport Canada
Canada Centre
200 Town Centre Court
Scarborough, Ontario
M1P 4X8
Telephone (416) 973-4599

Regional Manager
Transport Dangerous Goods
Transport Canada
1035 Galt Street, 2nd Floor
Verdun (Quebec)
H4G 2R1
Telephone: (514) 283-7369

Regional Manager
Transport Dangerous Goods
Transport Canada
5670 Spring Garden Road
Halifax, Nova Scotia
B3J 1H6
Telephone (902) 426-9351

SIGNS AND SYMBOLS RECORD CHART

Using the signs and symbols resources provided, identify the hazardous materials used and stored in your lab or workplace. Record the symbol used on each item and describe the safe storage procedures followed.

HAZARDOUS MATERIAL	SYMBOL USED/MEANING	SAFE STORAGE PROCEDURE
e.g., 40 volume hydrogen peroxide	Warning Explosive	Dark brown glass or synthetic container. Stored in cool, dark, closed cupboard.

LOCALLY DEVELOPED SIGNS AND SYMBOLS

Visit a local workplace and identify the safety signs and symbols in use. Record details of these signs and symbols that are not included in the resources provided by your teacher.

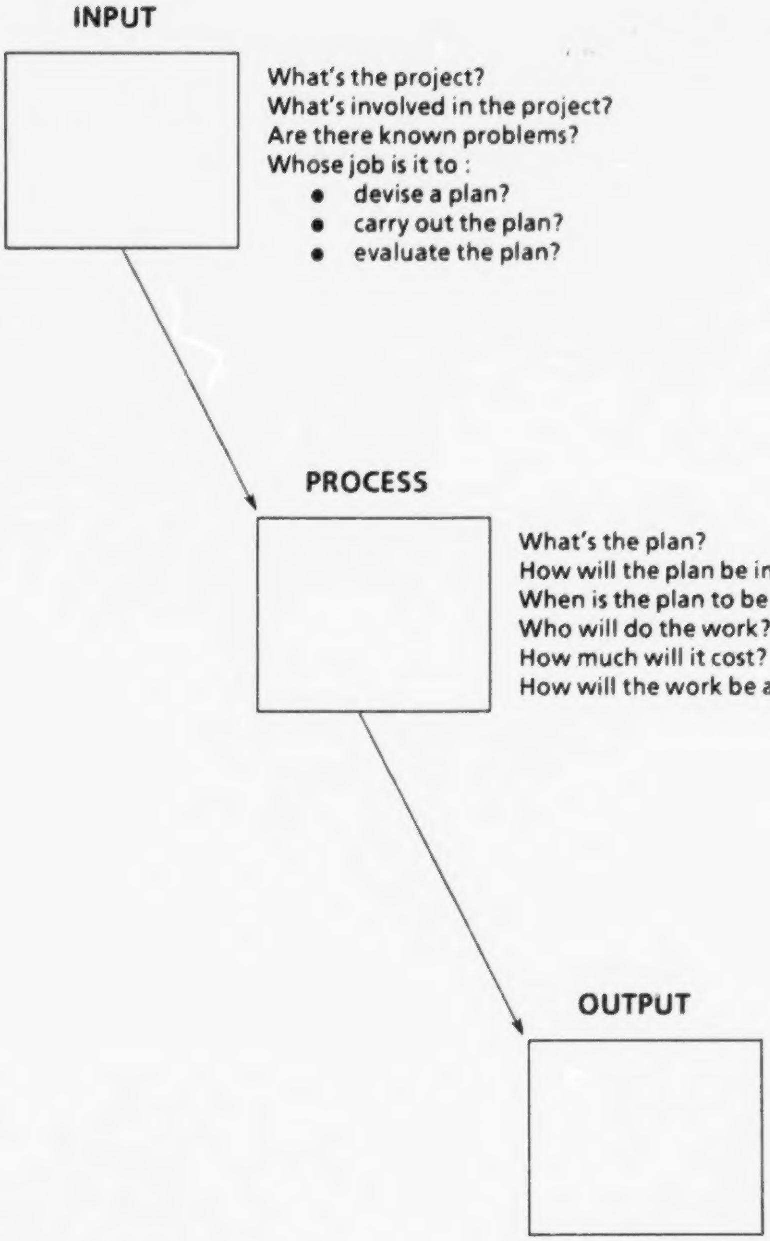
Workplace: ______________________ Date: ______________________

Student: ______________________

HAZARDOUS MATERIAL	SYMBOL USED/LOCATION	SAFE STORAGE PROCEDURE
e.g.,	On wall close to band saw	Eyewash station used for workers who get dust or other materials in their eyes.

241

INPUT, PROCESS, OUTPUT MODEL



INPUT

What's the project?
What's involved in the project?
Are there known problems?
Whose job is it to :

- devise a plan?
- carry out the plan?
- evaluate the plan?

PROCESS

What's the plan?
How will the plan be implemented?
When is the plan to be completed?
Who will do the work?
How much will it cost?
How will the work be accomplished?

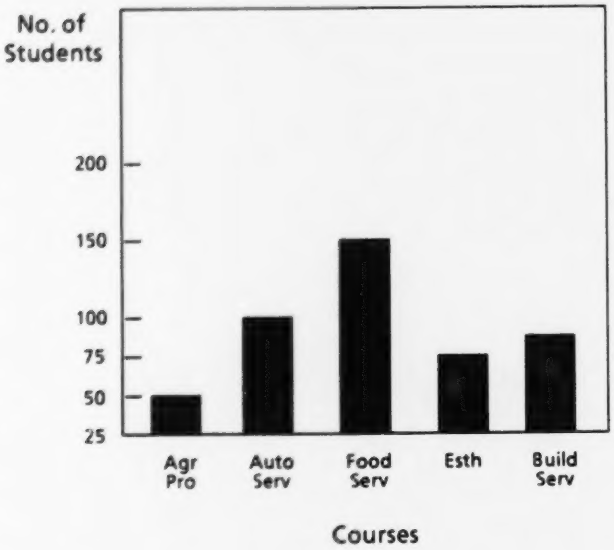
OUTPUT

Was the plan achieved?
Is the product exactly as planned?
What changes could be made to improve the product or the way it was produced (e.g., time, cost, quality)?

TYPES OF CHARTS AND GRAPHS

No. of Students	Courses	Percent
50	Agr Pro 16	10.6
100	Auto Serv 16	21.3
150	Food Serv 16	31.9
75	Esthetology 16	16.0
95	Building Serv 16	20.2

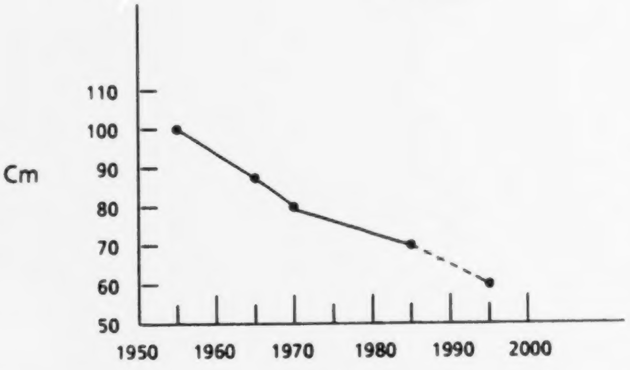
CHART



BAR GRAPH

AVERAGE RAINFALL	
Year	cm
1955	100
1965	90
1975	80
1985	60
1990	?

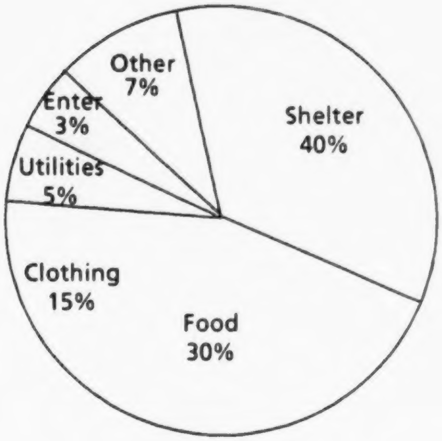
CHART



LINE GRAPH

COST OF LIVING	
ITEM	%
Shelter	40
Food	30
Clothing	15
Utilities	5
Entertainment	3
Other	7

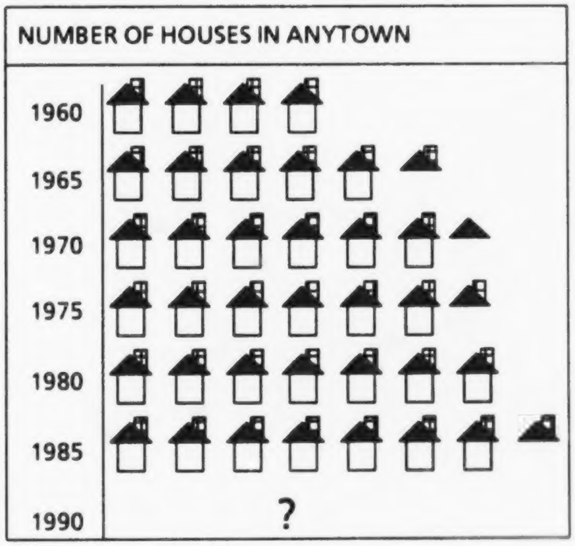
CHART



PIE GRAPH

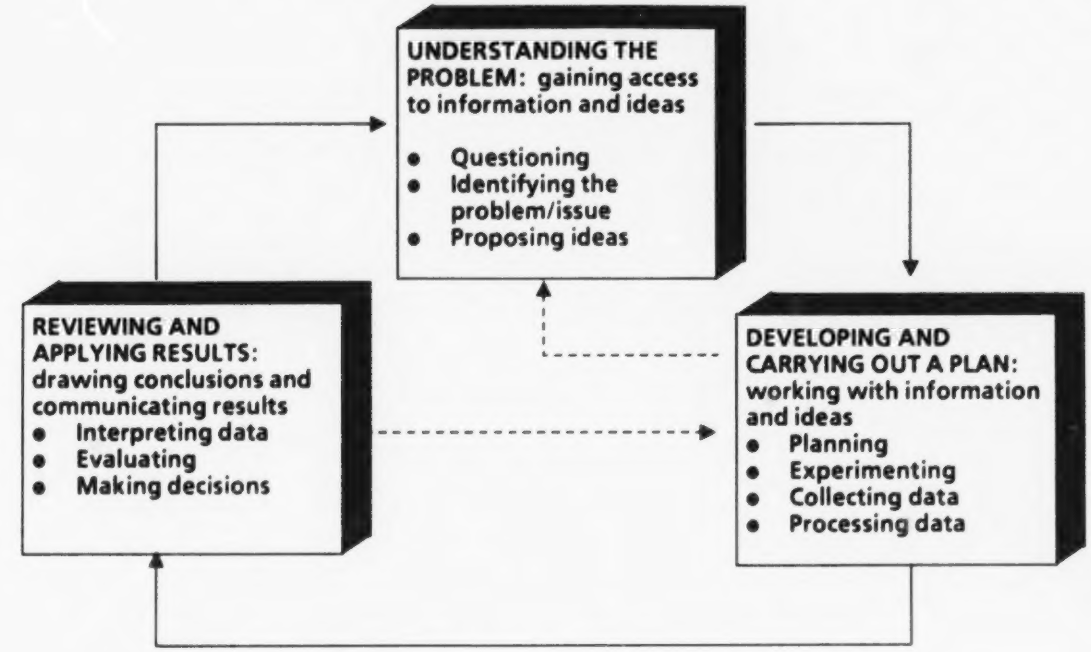
NUMBER OF HOUSES IN ANYTOWN	
1960	400
1965	550
1970	625
1975	650
1980	700
1985	750
1990	?

CHART



PICTOGRAPH

PROBLEM-SOLVING/DECISION-MAKING MODEL


UNDERSTANDING THE PROBLEM: gaining access to information and ideas
• Questioning
• Identifying the problem/issue
• Proposing ideas
DEVELOPING AND CARRYING OUT A PLAN: working with information and ideas
• Planning
• Experimenting
• Collecting data
• Processing data
REVIEWING AND APPLYING RESULTS: drawing conclusions and communicating results
• Interpreting data
• Evaluating
• Making decisions

Decision made or problem solved:

How, using the above model, was the decision made or the problem solved?

8. ENTREPRENEURSHIP

Entrepreneurship is concerned with establishing and operating a small business (small businesses usually have from one to twenty employees). An entrepreneur is self-employed and tends to be independent, self-reliant, have drive, energy and a need for personal achievement. An entrepreneur may create a new product or service or develop a new and improved method to manufacture a product or provide a service. Every occupational cluster within the Integrated Occupational Program provides opportunities for entrepreneur.

Owning and operating a small business may be a realistic goal for students who attain an IOP Certificate of Achievement and teachers should encourage students to identify the potential areas for entrepreneurial activities within each occupational course.

The concepts, skills and attitudes included in this unit are:

1. Recognizes entrepreneurial opportunities
2. Recognizes common characteristics of small businesses
3. Identifies the advantages and disadvantages of being in business
4. Recognizes costs of operating a business
5. Appreciates that not all money earned is profit
6. Identifies business opportunities related to personal abilities and interests

E7. Identifies abilities required to establish a business.

RESOURCES

STUDENT RESOURCE

- *Working: Today and Tomorrow* (Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

Correlation of Learning Objectives with Student Resource

Concepts, Skills and Attitudes	*Working: Today and Tomorrow*
8. Entrepreneurship	Chapter 5

TEACHER RESOURCES

- Resource 64, "Entrepreneurship: Ten Ideas for Teachers"
- Resource 65, "Basic Business Operating Procedures"
- Resource 66, "Entrepreneurship: A Problem-Solving/Decision-Making Model"
- Resource 67, "Successful Entrepreneurs: Selected Case Studies
- Resource 68, "Methods of Operating a Small Business: Advantages and Disadvantages"
- Resource 69, "Reasons for Small Business Failures"
- Resource 70, "Characteristics of a Successful Entrepreneur"
- Resource 71, "Certificate of Entrepreneurship"

E = Elective Component

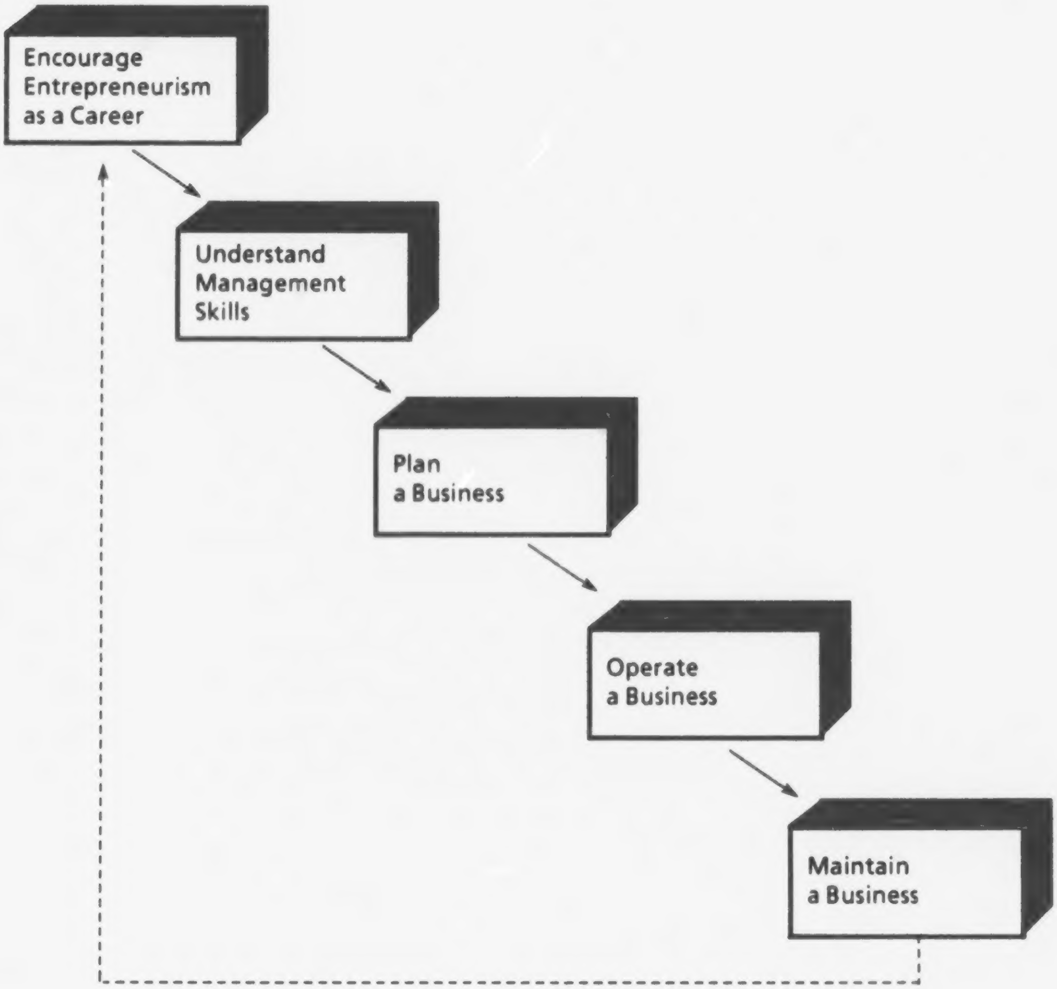
A variety of resources related to entrepreneurship and small business operations may be obtained from:

- Alberta Career Development and Employment
- Alberta Consumer and Corporate Affairs
  Offices are located in the following areas:

Calgary	297-5700
Edmonton	427-5782
Grande Prairie	743-7231
Lethbridge	381-5360
Medicine Hat	529-3535
Peace River	624-6214
Red Deer	340-5241

- Canadian Foundation for Economic Education
  252, 3100 St. West
  Suite 7-205
  Toronto, Ontario
  M5S 1V5
  (416) 968-2236
- Canadian Organization of Small Business
  Suite 103, 10301 - 108 Street
  Edmonton, Alberta
  T5J 1L7
  (403) 423-2672
- Ministry of Industry Trade and Technology
  Province of Ontario
  Queens Park
  Toronto, Ontario
  M7A 2E1
- Junior Achievement
- Local newspapers – display and classified business advertisements
- Flyers announcing new business operations
- Copies of notice board advertisements offering entrepreneurial services
- Community partners.

Entrepreneurship is an evolving dimension in the areas of industrial, technical, vocational and occupational education. In recent years, educators and representatives from business and industry have cooperated to develop policies and plans to teach entrepreneurial skills. The basic program-development model may be presented in flow chart form as:


Encourage Entrepreneurism as a Career
Understand Management Skills
Plan a Business
Operate a Business
Maintain a Business

The concepts, skills and attitudes introduced in each stage should be reinforced at each subsequent stage as entrepreneurial skill development is an ongoing process.

1. ENTREPRENEURIAL OPPORTUNITIES

In Alberta, the number of small businesses doubled during the period 1972-1980, to 86,533 businesses from 47,549 (Statistics Canada, Small Business Secretariat).

The following ventures are examples of entrepreneurial activities that may be undertaken in the context of the eight occupational clusters.

Agribusiness
- lawn and garden care
- bedding plant sales
- basic lawn tools clean-up and maintenance.

Business and Office Operations
- concession operation at a school dance or sports event
- telephone answering or messenger service
- courier service.

Construction and Fabrication
- construct and sell:
  - wooden products
  - metal products
- handyperson services.

Creative Arts
- photographic services (e.g., takes photographs, enlarges negatives)
- craft production and sales.

Natural Resources
- firewood sales
- make specialized paper products from wood pulp.

Personal and Public Services
- aged care services
- child care services
- beauty care services
- laundry/ironing service.

Tourism and Hospitality
- food production and sales (e.g., sandwiches, baked goods)
- janitorial service
- window cleaning
- paper/flyer deliveries
- pet minding/sitting.

Transportation
- car wash service
- basic small-motor maintenance
- storage service.

The following resources may guide the integration of the entrepreneurism unit into each occupational course:

Resource 64, "Entrepreneurship: Ten Ideas for Teachers"
Resource 65, "Basic Business Operating Procedures"
Resource 66, "Entrepreneurship: A Problem-Solving/Decision-Making Model".

Suggested Activities/Community Partnerships

1. Share entrepreneurial experiences that teachers, students and parents may have undertaken.

2. a. Brainstorm to identify entrepreneurial opportunities that relate to the course.

   b. Discuss:
      - Which of the small business opportunities identified could be started with the knowledge, skills and attitudes you have now?
      - What additional education/training might be useful to provide you with the necessary knowledge, skills and attitudes?

3. Invite local business owners to discuss how they started their operations, the challenges they faced and what they would do differently if they had to start a new business.

   a. Read and discuss Resource 67, "Successful Entrepreneurs: Selected Case Studies".

   b. Read the local newspapers and journals and make a copy of articles and stories that relate to entrepreneurial successes and failures. Make a scrapbook of the items or share them with classmates by attaching them to a class bulletin board.

2. CHARACTERISTICS OF SMALL BUSINESSES

Small businesses may be operated in different ways:

- Sole Proprietorship – the simplest form of business ownership. One person owns the whole business operation and makes all the decisions.
- General Partnership – two or more people share the responsibility of operating the business.
- Incorporated Business – a private corporation which protects the owner/shareholders against personal loss. An incorporated business has:
  - a Board of Directors who direct the way the business is operated
  - shareholders who provide money to start the business and receive profits made by the business.

Other forms of business ownership also exist. Anyone interested in starting their own business should consult a lawyer, accountant or a local small business advisory agency.

Suggested Activities/Community Partnerships

1. a. While engaged in a field experience activity, inquire if the business is a sole proprietorship, general partnership or an incorporated company. Use Resource 68, "Methods of Operating a Small Business: Advantages and Disadvantages", to keep a record of responses.

b. Share your findings with classmates, and discuss
  - What are the advantages/disadvantages of each operating method?
  - If you were setting up a small business, which method of business operation would you choose? Why?

2. a. Invite a representative from a local bank, trust company, loan agency or Alberta Consumer and Corporate Affairs, to discuss the advantages and disadvantages of each method of operating a small business.

   b. Invite community partners to discuss small business operation.

3. ADVANTAGES AND DISADVANTAGES OF BEING SELF-EMPLOYED

Not all small businesses are successful. Successful people (employees, employers, entrepreneurs, volunteers) usually demonstrate the following traits:

- perseverance
- desire and willingness to take risks
- competitiveness
- self-reliance
- need to achieve
- self-confidence
- willingness to work long hours.

In addition, self-employed and other people need to keep up-to-date about

- improvements in their field (e.g., suppliers, products)
- consumer buying trends (e.g., types of product/service wanted)
- local and regional competitors
- bank charges (e.g., fixed charges, loan interest payments)
- changes in tax regulations that may affect the business
- record keeping procedures (e.g., computerized inventory systems)
- business profit/loss status.

Suggested Activities/Community Partnerships

1. a. Brainstorm: What questions might a small business owner be asked in order for you to gain a better understanding of why he or she is an entrepreneur? (See Suggested Teaching Strategies, "Brainstorming".)

   b. Construct a questionnaire and use it to survey three owners of local small businesses. Sample questions may include:
      - why are they in business for themselves?
      - what are the advantages/disadvantages of being an entrepreneur?
      - would they recommend being an entrepreneur to others?

   c. Compare and summarize the responses received, and present your summary to the class.

2. a. Read Resource 69, "Reasons for Small Business Failures", which outlines some of the reasons why some small businesses fail.

   b. Invite community partners to discuss the things that they do to stay in business.

3. a. Select and visit two different types of small businesses. Identify the similarities and differences between the two operations. For example,
    - number of people employed
    - type of product sold
    - type of service provided
    - location
    - visibility
    - number of customers seen using the business
    - length of time business has been operating.

   b. Which operation appears to be the most successful? Why?

4. COSTS OF OPERATING A BUSINESS
5. BUSINESS PROFITS

Not all of the money received when operating a small business is profit. A large proportion of income goes to pay the operating costs of the business.

Record keeping is an important part of the process of operating any business. By law, all books and records, including sales slips, invoices, bank statements, cancelled cheques, must be kept at the place of business or some other approved record office. At any time, the account books and records of a business can be examined by representatives from both provincial and federal government agencies; such as:

- Workers' Compensation Board
- Revenue Canada
- Alberta Consumer and Corporate Affairs.

When starting a business for the first time, some people do their own books. It is essential that these record/account books be set up to clearly show:

- rent
- utilities (e.g., electricity, gas, telephone)
- wages to self and to staff
- benefits (e.g., Workers' Compensation, Alberta Health Care)
- purchases (e.g., invoices, statements)
- sales (e.g., sales slips, bank statements)
- assets (e.g., equipment, inventory)
- liabilities (e.g., money owed, bad debts).

Suggested Activities/Community Partnerships

1. Each type of business has its own particular operating costs, cash flow and projected profit margins. Discuss:
    - What are usually the known costs of operating any small business?
    - What might be some of the unanticipated costs?
    - What profits/losses can be expected after six months? After one year?

2. Invite a community partner from a local bank, trust company or loan company to discuss the financing of small business operations, including:
    - anticipated costs
    - unanticipated costs
    - handling profits and losses over the short and long term.

6. PERSONAL ABILITIES, INTERESTS VS. BUSINESS OPPORTUNITIES
7. ABILITIES REQUIRED TO ESTABLISH A BUSINESS

The characteristics of successful entrepreneurs are similar to the traits possessed by other successful people. Successful people tend to be:

- interested in their work
- committed to doing a quality job
- time and task oriented
- decision makers and problem solvers.

The major difference between an entrepreneur and the average employee is said to be the entrepreneur's willingness to take certain types of risk.

Suggested Activities/Community Partnerships

1. Use Resource 70, "Characteristics of a Successful Entrepreneur", to compare your own abilities and interests with those described .
   (Note: Teachers may want to review components of Unit 1, "Introductory Skills", and Unit 2, "Organizational Skills", as part of this activity.)

2. a. Discuss the issue of being an entrepreneur from two perspectives:
      - Why I think I can be an entrepreneur
      - Why I think I cannot be an entrepreneur.

   b. Working in small groups, take turns suggesting why you think each member of the group would/would not make a good entrepreneur. Support your statements with reference to the related traits.

3. Invite a school counsellor to discuss entrepreneurism and how people become entrepreneurs. Attempt to answer the following questions:
   - Can people learn or be taught how to be an entrepreneur?
   - Are entrepreneurial abilities inherited or are they learned? Which, if any, may be inherited? Which, if any, may be learned?

4. Risk-taking is said to be an important trait of entrepreneurs. Brainstorm: What type of occupational risks would an entrepreneur take?

E8. ESTABLISHING A SMALL BUSINESS

Working alone or as a member of a group, students may be given the opportunity to set up a small business by following the procedure outlined below:

Develop a Business Plan

1. Obviously, business plans of individual students will vary. If possible, have each student group engage in a different type of venture (e.g., sales, production, service). (Where student numbers and interests permit, each of these components may be handled by individuals within each group. This strategy permits each student to experience and assume sole responsibility for a task while retaining responsibility to work as a member of a team.)

E = Elective Component

An alternative strategy might be to involve all students in a small class in a single business venture. In this situation, two or more students may take responsibility for a specific segment of the business plan.

In both strategies, being able to take individual and group responsibility are primary learning objectives.

Where possible, obtain a mentor for each project. The mentor should be willing to give advice but not take over the project.

2. Have each group of students use a problem-solving/decision-making model to:
    - identify the business venture and ensure that it is practical given restraints of time and resources
    - identify the resources needed
    - develop a flow chart to lay out the strategies to be used.

Implement the Business Plan

Use a problem-solving/decision-making process at each stage of the implementation

1. Establish a production schedule to indicate:
    - time needed to produce each product
    - time needed to perform each service.

2. Consider alternative marketing strategies. Select the most appropriate strategy(ies).
    - posters
    - displays
    - flyers
    - telephone sales
    - advertisements
    - networking
    - radio announcements (school P.A. system)
    - door-to-door sales/contacts.

3. Produce the product or develop the service.

4. Market the product or service:
    - implement the most appropriate strategy
    - use other strategies as necessary.

5. Sell the product or service.

Evaluate the Business Venture

1. Evaluate the success of the venture in terms of:
    - profit
    - number of satisfied customers
    - numbers of repeat orders.

2. Consider what each group would do differently if it were to repeat the same business venture.

Record Keeping

- maintain a log of all activities performed
- keep financial records, using a simple bookkeeping format
- calculate percentage of profit and loss on each sale or service
- calculate profit and loss from an increased production or service schedule.

Suggested Activities/Community Partnerships

1. During and at the conclusion of each business venture discuss: How does it feels to be in business for yourself? To be your own boss?

2. Project your feelings and learnings to possible future careers. Discuss:
   - I do/do not want to be an entrepreneur? Why, or why not?
   - Being an entrepreneur makes me . . .

3. Ask the mentor to provide the group with feedback on its performance. Where appropriate, have the mentor discuss a given group's performance with the whole class.

Resource 71, "Certificate of Entrepreneurship", may be used as a guide to produce a local school certificate for each student who participates in a business venture. The certificate may serve as a reminder and reinforce the knowledge gained and the skills and attitudes developed through this learning activity.

ENTREPRENEURSHIP: TEN IDEAS FOR TEACHERS

- Emphasize practical skills training such as assertiveness, goal setting, small group presentations and listening skills.

- When faced with a problem that involves the students, let them provide input on how to solve it. Form student task forces or "quality circles" to study the problem and recommend solutions. By the time these students become employees, participative problem solving will be second nature.

- Invite business people to your classrooms and take trips to workplaces. Ask these individuals to share work examples with students. Let students see statistical reports, letters and memos. Examine performance review forms. Students will soon see that cooperation, self-discipline, dependability and interpersonal skills are as important in the work world as they are in the classroom.

- Emphasize project work. Employees are finding that little can be done in the high-tech world without the involvement of a committee or a project team.

  Involve students in setting group goals and accountabilities. Evaluate the students on their contribution to the group effort as well as on the end product. Let them evaluate and discuss how the group approached the project so they recognize effective/ineffective group processes.

- Create assignments that encourage students to communicate with business people or visit the workplace to gather data.

- Encourage students to write more letters and reports that persuade, deliver tactful criticism or ask for information. Emphasize concise writing: short and to the point.

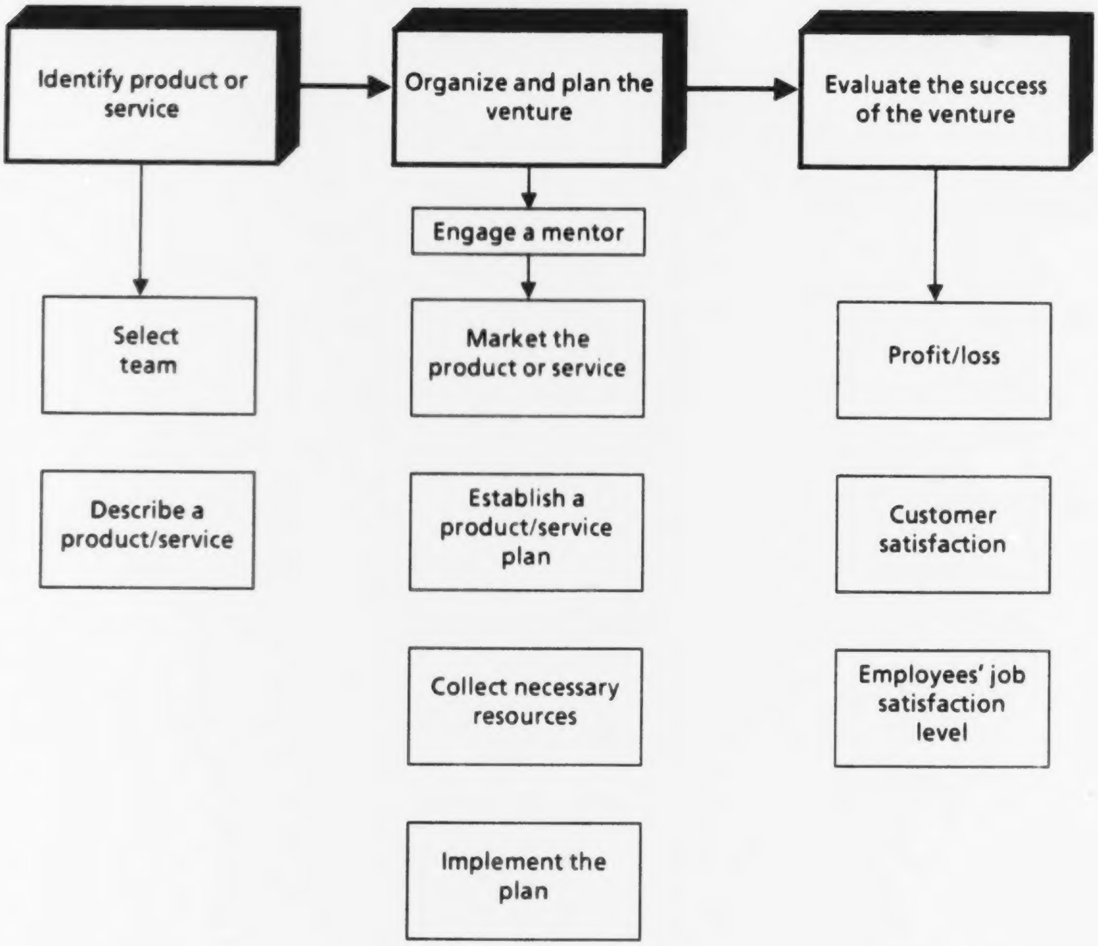
- Involve students in whole-group or sub-group discussions and hands-on activities. Students who are "talked at" are not being prepared as potential employees/employers, to lead a meeting or to speak up when they hold a different point of view.

- Teach students how to write specific and measurable goals for themselves. Employees are expected to be able to set realistic short- and long-term goals as well as take action and meet deadlines.

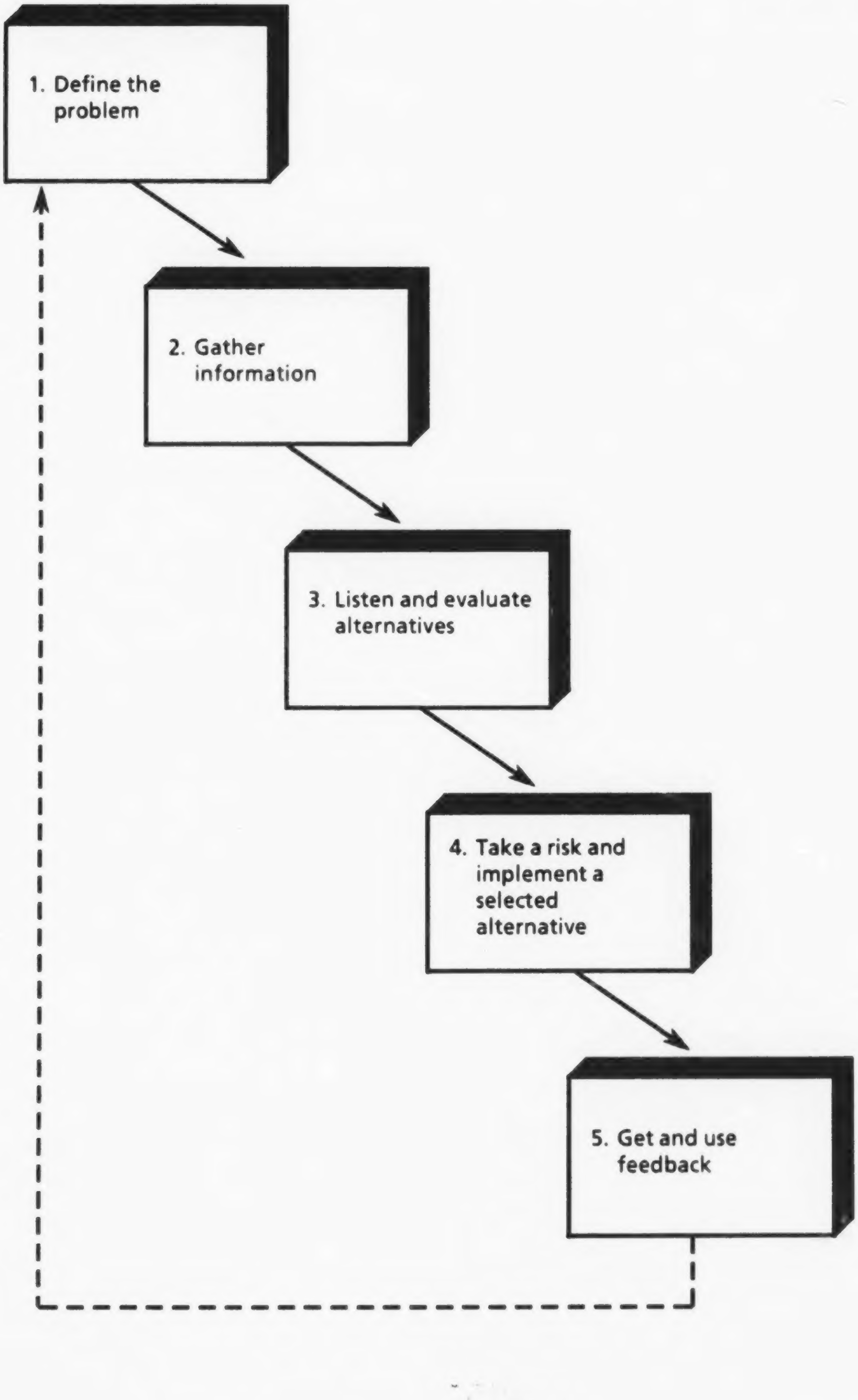
- Develop a positive discipline system that puts the responsibility for correction on the students. Involve students in designing the system and ensuring that the teacher administers it effectively.

- Provide incentives and rewards for desirable behaviour. A certificate at the end of the year for good attendance, for example, is too little too late. Find creative ways to make good behaviour pay. Businesses are realizing that incentives, not punishment, are the key to motivation.

BASIC BUSINESS OPERATING PROCEDURES


Identify product or service
Organize and plan the venture
Evaluate the success of the venture
Engage a mentor
Select team
Describe a product/service
Market the product or service
Establish a product/service plan
Collect necessary resources
Implement the plan
Profit/loss
Customer satisfaction
Employees' job satisfaction level

ENTREPRENEURSHIP: A PROBLEM-SOLVING/DECISION-MAKING MODEL


1. Define the problem
2. Gather information
3. Listen and evaluate alternatives
4. Take a risk and implement a selected alternative
5. Get and use feedback

SUCCESSFUL ENTREPRENEURS: SELECTED CASE STUDIES

MONEY

Clever kids are cashing in

Summer's a hot time for a new generation of pre-teen entrepreneurs

By Dennis Blank

Hundreds of precociously profit-minded kids are proving this summer that age has no monopoly on making money.

Through August, 82,000 teens will be self-employed, and an increasing number of kids 12 and under are striking out on their own, too.

"The young entrepreneur is emerging as this generation's new hero," says Vern Harnish, national director of the Association for Collegiate Entrepreneurs.

Harnish got more than 4,000 inquiries from teens and pre-teens after *Reader's Digest* published an article in February about young entrepreneurs.

Educators are adding encouragement. This fall, Tracey Gilbreath's fifth- and sixth-grade students in Hunt, Texas, will start with $3,000 in seed money from previous class money-making projects.

"The whole subject is picking up speed," Harnish says. "More parents are saying, 'Hey, rather than giving them an allowance, I am going to encourage my children to earn it in some little venture.'"

Here's a look at two ventures that succeeded in a big way, plus start-up tips.

Her secret: Scissors and a nose for news

Like any successful business person, Holly Smith of Wichita, Kan., wants her newspaper clipping service to grow. And with school out, she's devoting more time to her goal: Doubling sales by year's end.

Since she sent out her first mailing about a year ago, she has earned more than $550. Holly, 12, who will be in eighth grade next fall, spends a couple of hours a day reading local newspapers.

If she spots an article about one of her clients – mostly local entrepreneurs – she makes five copies and mails them for a fee of $2. She tries to recruit new clients by spotting articles and sending them clippings and a sales letter. ("I'm an entrepreneur, age 12 . . ." it begins.)

Holly's not sure what she'll do with her earnings. "My brothers and sisters think I should save it to buy a car."

She'd probably cut a good deal. "She has a real good head for business" says her father, Doug. "Everyone hates to go shopping with her, because she takes so long to check out the prices."

PAPER PROFITS: Holly Smith keeps a journal of her income and of expenses such as stamps.

This firm draws on a family of talents

TAKA Enterprises, a fledging stationery company based in Moorehead, Minn., is entering its busiest season. Since it began last August, most of the company's $350 in sales have come from crafts shows,which abound during the summer.

The owners are fledglings, too – Trevor, 9, Audrey, 9, Kevin, 5, and Amy, 2, the children of Craig and Carol Brandt. The kids launched the company with part of the $1,200 they've earned as prizes in almost 40 coloring contests. Their product line includes notepads and greeting cards bearing the Brandts' prize-winning art work.

"The most fun part is doing the drawing," says Trevor. "That's the only thing Amy can do right now." Audrey has branched off into making personalized birth announcements.

The children package the stationery in batches of 8 to 12 sheets, wrap it, and head for the stores and craft shows. One recent Saturday morning, the two oldest were up at 6:00 a.m. "raring to go," and ended up selling more than $100 worth at a weekend craft show, their father said.

They're paid 60 cents an hour for their time; the rest goes back into the business.

"They are more successful if they come up with the ideas themselves," says Brandt, who's a salesman in a music store. "We're amazed at how they're willing to work."

Tips for pre-teen tycoons

Think big, start small. Don't risk more than you can spend; use allowance to buy a product that can be resold at a profit. Write for reports by the Center for Entrepreneurship, Wichita State University, Wichita, Kan. 67208. some ideas:

- Repair bikes
- Care for pets, house plants
- Sell seeds and plants
- Wash cars
- Address envelopes
- Paint house #'s on curbs
- Do typing, copying services
- Wrap gifts

USA WEEKEND•JULY 4-6, 1986•9

Cited in *Entrepreneurship in the Alberta Curriculum: A Monograph*. Copyright by Alberta Education, 1986. Reprinted with permission.

THE NEW ENTREPRENEURS

(MacLean's Vol. 97, No. 29, July 16, 1984)

By combining their schooling with their ingenuity and a dash of entrepreneurial spirit, some young Canadians have managed to escape the grey spectre of unemployment by working for themselves. Some accounts of their success follows:

Roxane Taylor and Nancy-Anne Gerdes: In 1982 the two high school graduates from Calgary decided to supplement their $110-a-week earnings as part-time grocery clerks. Their inspired idea: custom-designed, hand-painted running shoes. Starting with a booth at the Calgary Stampede, Taylor, 24, and Gerdes, 25, have watched their innovation grow into a busy retail and wholesale company called Funky Punkers. Recently relocated in larger premises in Calgary's Stephen's Avenue Mall, Funky Punkers sells the $34.99 running shoes as well as a complete line of off-beat clothing and accessories for men and women. Pleased by monthly sales of $12,000 and the fact that they employ five people, Taylor and Gerdes are planning to expand their operation to Vancouver and Toronto next year. Said Taylor: "It is wonderful to see an idea grow into a business."

Vicent Micallef: Eighteen months ago he started with an idea based on computer software. "Now," he said proudly, "we employ 18 people and are looking at operating 72 stores nationally by 1986." Micallef graduated in business administration from Simon Fraser University in Burnaby, B.C., last August. Now he is a partner, along with his brother, Joseph, and another Simon Fraser graduate, Bud Eaton, in Compu Software Inc. Compu is one of the biggest business success stories to come out of Vancouver in recent years. While still at university, Micallef, an avid home computer user, noticed that most computer stores sold only computers. Buyers often had to obtain the programs that ran the machines – the software – separately. Said Micallef: "There was a huge market niche for microcomputer software that was not being addressed." The three Vancouverites set out to fill the gap and since April, 1983, they have opened stores in Vancouver, North Vancouver and one in Victoria. And they plan to open three other outlets in Vancouver and Toronto. Said Micallef: "Things have been so busy that I have not had time to count how rich I have become."

Alena Alberani and Karen Obermaier: Dressed in colourful clown outfits, Alberani, a 19-year-old student at Halifax's Mount St. Vincent University, and her partner, Obermaier, also 19, a student at Dalhousie University, roam the streets of Halifax distributing advertising flyers for a local restaurant. They call their business Motion Promotions and they started it about a month ago. The two women became business partners after they were hired to do a temporary promotion job for another company. "After five days we were unemployed again," said Alberani. "So we decided to create our own work." With an original investment of $600, Alberani and Obermaier began to advertise their personalized promotion service. They charge $12 an hour to distribute material on the street. Said Alberani, who expects that she will earn enough in the next few months to finance her language studies next year, "I never envisioned that I would be doing this."

Heather MacKenzie: At 24, she is one of seven MBA students who created a Montreal company called McGill Business Consulting Bureau in May. The young entrepreneurs are offering their advice to companies for $90 a day. Said MacKenzie: "We are doing everything from market research to arranging a government patent for a client with a new invention." The seven partners expect to generate $36,000 worth of business by the end of the summer. Said MacKenzie: "We all came into this not only to have a job but to give ourselves some practical experience in our chosen field."

Joseph Gonyeau: Success has overwhelmed the 22-year-old owner of Taygon Contracting Ltd. of Rexdale Ontario. Gonyeau is a business administration student at Humber College and he opened his landscaping and grounds maintenance company last summer after deciding that temporary summer jobs washing dishes and loading trucks were too demoralizing and paid too little. He took out a bank loan for $5,000 and set up his office in the back of his parents' house. Taygon now claims monthly sales of $12,000, and Gonyeau employs five full-time staff. Said Gonyeau: "It has gone so much better than I expected that I have had to turn business away."

Cited in *Entrepreneurship in the Alberta Curriculum: A Monograph*. Copyright by Alberta Education, 1986. Reprinted by permission.

METHODS OF OPERATING A SMALL BUSINESS: ADVANTAGES AND DISADVANTAGES

Interview a number of owners of local businesses and complete the chart below.

METHOD	ADVANTAGES	DISADVANTAGES
Sole Proprietorship Example of two local businesses: 1. ____________ 2. ____________		
Limited Partnership Example of two local businesses: 1. ____________ 2. ____________		
Incorporated Company Example of two local businesses: 1. ____________ 2. ____________		

REASONS FOR SMALL BUSINESS FAILURES

Small businesses fail for a variety of reasons. Two of the major reasons for failure are:

1. LACK OF PLANNING AND ORGANIZATION

- Improper market identification. The entrepreneur may lack an understanding of the market into which he or she is entering. This can lead to improper pricing (out of line with market expectations or conditions), misdirected marketing (attempting to sell the product to an inappropriate target group), misperceived market size and underestimation of the strength of competitors. Any of these factors may lead to potential customers being unaware of the entrepreneur's product or service.

- Failure to prepare a proper business plan. There are few things more important to entrepreneurial success than developing an effective business plan.

- Going ahead with too little start-up capital. The temptation to "get underway" is very strong. Some entrepreneurs jump the gun and establish a business before it is adequately financed.

- Underestimating capital requirements and costs. An entrepreneur may mismanage finances in the planning and operating stages of the business.

- Failure to secure "back-up capital". The unforeseen always seems to happen, and it is the wise entrepreneur who is prepared for it.

- Failure to negotiate firm terms with suppliers. One can start a business under a certain set of conditions but, if suppliers change their policies toward the business, circumstances can change quickly (e.g., a change in the previously agreed upon times of bread delivery may affect a variety store's business).

- Too rapid growth. Trying to do too much, too quickly is almost a universal pitfall.

2. PERSONAL TRAITS AND ABILITIES

- Lack of commitment. Setting up a business is not a casual undertaking. The time and energy required will be immense.

- Complacency. Because the entrepreneur is doing well doesn't mean that such will always be the case. The competition may change, buyer preferences may change, and so on. The entrepreneur cannot afford to take anything for granted.

- Lack of experience. Sometimes it can seem so easy to get into a business. What one doesn't know may be a lot less apparent than what one does know.

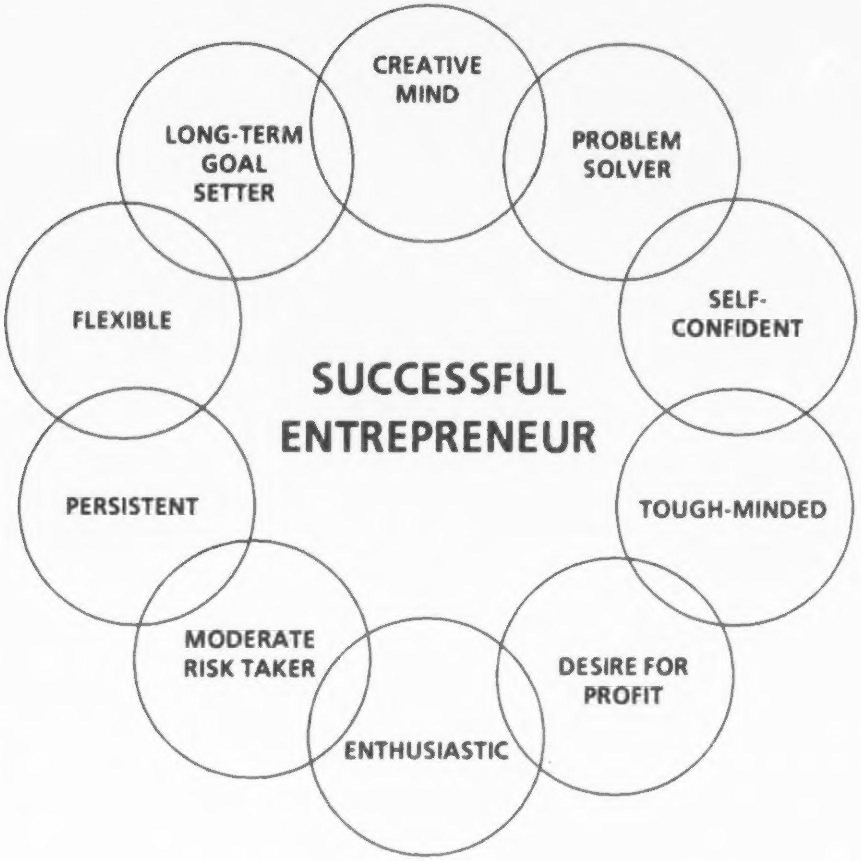
- Domestic pressures affecting the owner/manager. It takes hard work and a great deal of time and effort to make a business succeed. This can put a lot of pressure on one's home life. If domestic conditions are happy, they can provide great support to an entrepreneur. If conditions are strained, it may lead to the failure of the business, relationship, or both.

- Inability to recruit competent employees. The attitude of employees toward the business is as important as the owner's attitude.

- Dishonesty. It will come as no surprise that some entrepreneurs have ended up in serious trouble because of dishonest behaviour on their part or on the part of employees, suppliers, etc.
- Poor communication. Interrelationships among members of the management team or other staff.

This listing points out many of the pitfalls awaiting the unwary entrepreneur. To succeed, an entrepreneur has to plan well and foresee all the potential problems. The "idea" is only the beginning. Turning it into a successful business takes a lot of hard work and planning.

CHARACTERISTICS OF A SUCCESSFUL ENTREPRENEUR


CREATIVE MIND
PROBLEM SOLVER
SELF-CONFIDENT
TOUGH-MINDED
DESIRE FOR PROFIT
ENTHUSIASTIC
MODERATE RISK TAKER
PERSISTENT
FLEXIBLE
LONG-TERM GOAL SETTER
SUCCESSFUL ENTREPRENEUR

From *Entrepreneurship in the Alberta Curriculum: A Monograph*. Copyright by Alberta Education, 1988. Reprinted with permission.

_______ SCHOOL

CERTIFICATE OF ENTREPRENEURSHIP

STUDENT: ____

Has successfully participated in a small-business venture project

Name of project: ____

19__

Teacher: ______________________ **Principal:** ______________________

9. COMMUNITY PARTNERSHIPS

Broadly defined, "a community partnership" is an agreement between a school and the private sector to a mutually acceptable set of purposes and a means for achieving such purposes. Community partnership is based on the belief that educators can enhance students' learning experiences by bringing the community into the school and by taking the students out into the community.

As students become increasingly involved in community partnerships in their schooling, the first-hand experiences enhance their appreciation of the need for basic computational, communication and social skills in order to achieve on-the-job success. As students see the increased need and relevance of acquiring these skills, they become more motivated to achieve.

The primary interactive functions of community partnerships should be to stimulate students' interests and to assist them to:

- learn about life
- learn about careers
- learn how to learn
- learn by doing
- learn about others
- learn about self

Community partnerships have two dimensions:

- **In-school partnerships:** guest presentations, demonstrations, customer services, etc.
- **Field experiences:** students engage in job shadowing and other on-the-job learning experiences within the community.

Both dimensions are integral components of each course in the Integrated Occupational Program. By Grade 11, however, increased emphasis should be given to the field experience dimension. Through real life, on-the-job experiences, students may be better able to see the need for and relevance of their core courses and to develop both transferable and occupation-related knowledge, skills and attitudes, including the ability to demonstrate:

- good work habits
- safety and sanitation practices
- pride in self
- pride in work
- respect for others
- respect for the property of others.

By Grade 11 level, community partnerships should comprise no less than thirty percent of each occupational course.

Specific procedures and legislation about work experience education (community partnerships) is provided in the current Alberta Education *Program Policy Manual* available upon written request from Central Support Services, Box 14, 11160 - Jasper Avenue, Edmonton, Alberta, T5K 0L2, and in the Work Experience Program: Teacher Resource Manual, Junior and Senior High School, 1990, available from the Learning Resources Distribution Centre, 12360 - 142 Street, Edmonton, Alberta, T5L 4X9

The concepts, skills and attitudes addressed in this unit reinforce those described in Unit 1, "Introductory Skills", and Unit 2, "Organizational Skills". These include:

1. Orients self to the workplace
2. Demonstrates appropriate work habits
3. Uses safe and sanitary practices
4. Demonstrates pride in self
5. Demonstrates pride in work performance
6. Shows respect for others
7. Respects the property of others.

RESOURCES

STUDENT RESOURCE

Working: Today and Tomorrow (Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

Correlation of Learning Objectives with Student Resource

Concepts, Skills and Attitudes	*Working: Today and Tomorrow*
9. Community Partnerships • Work Experience • Cooperative Education	Chapter 3 Chapter 5

TEACHER RESOURCES

- Resource 72, "Community Partnership Evaluation Form (Teacher)"
- Resource 73, "Community Partnership Evaluation Form (Student)"
- Resource 74, "Community Partnership Evaluation Form (Community Partner)"
- Integrated Occupational Program: Information Manual for Administrators, Counsellors and Teachers. Alberta Education, 1989.
- Organizing an Alberta Career Day: A Guide for Teachers, Counsellors and Administrators. Alberta Education, 1986.
- Experience-based Learning: How to Make the Community Your Classroom. Northwest Regional Educational Laboratory, Portland, Oregon, 1977.
- Manual for Cooperative Work Study Programs. The Cooperative Career Work Education Association of Canada, Guidance Centre, University of Toronto, 1987.
- Community partners.

PREPARING FOR THE TRANSITION

Throughout the Integrated Occupational Program, students will have participated in a variety of community partnership activities. Each partnership activity should be designed to enhance students' learning opportunities and experiences and to prepare them for their transition to either the world of work or to other educational/training institutions. The following statement is contained in the *Program of Studies/Curriculum Guide* at each grade level.

Each of the occupational courses in the Integrated Occupational Program is designed to enable students to develop essential knowledge, skills and attitudes in the context of one or more occupational cluster.

In Grades 8 and 9, IOP students will have gained AWARENESS of the eight occupational clusters addressed in the occupational component of the program through their participation in an assortment of practical arts learning experiences.

In Grade 10, students will have EXPLORED potential career opportunities within the eight occupational clusters. Grade 11 students will narrow their career focus and will select an ORIENTATION in two or more related occupational areas. Grade 12 enables students to narrow their career focus even further and to develop skills in PREPARATION for their transition to either the world of work or to other educational/training institutions.

LEARNING BY DOING

Whereas in previous grades, students may have been more involved with observing tasks through job shadowing, etc., at the Grade 11 level, field experiences should provide students with a variety of opportunities to learn by doing -- to be actively involved in performing meaningful work.

Through this increased involvement in the workplace, students gain first-hand knowledge of the human and work processes associated with particular occupations and workplaces.

EVALUATING COMMUNITY PARTNERSHIPS/FIELD EXPERIENCES

Evaluation of community partnerships consists of two inseparable aspects. One is the evaluation of the program, the other is the evaluation of a student's behaviour and performance after participating in a partnership.

Evaluation of community partnerships should focus on:

- the adequacy of the partnership in serving the educational needs of students
- the strengths and weaknesses of the partnerships
- the achievement of objectives as outlined
- the benefits of the partnerships.

Evaluation of each partnership should involve all concerned:

- the student
- the teacher
- the community partner.

- The student's evaluation may include:
  - a self-evaluation of the work placement, outlining areas of strength, areas where improvement is needed, etc.

- The teacher's/coordinator's evaluation may include:
  - assessing the student's in-class assignments and participation
  - reviewing student log sheets and diary on a regular basis
  - visiting and observing the student at work
  - keeping anecdotal records after each visit
  - reviewing the student's progress with the supervisor
  - reviewing the student's progress with the student
  - taking into account the student's self-evaluation of progress
  - calculating a final mark for reporting purposes.

- The community partner's evaluation may include:
  - observing the student's performance on the job, and giving immediate feedback to the student
  - completing written progress reports or checklists
  - assessing activities related to projects and assignments from the in-school component
  - reviewing work and employability skills
  - completing a final evaluation.

The following resource may be used as is, or adapted to evaluate community partnership activities.

- Resource 72, "Community Partnership Evaluation Form (Teacher)"
- Resource 73, "Community Partnership Evaluation Form (Student)"
- Resource 74, "Community Partnership Evaluation Form (Community Partner)"

Suggested Activities/Community Partnerships

1. Suggestions

   The *Program of Studies/Curriculum Guide*, as well as this document, includes suggested community partnership activities including a number that focus on providing students with field experiences. Teachers are encouraged to complement and supplement these community partnerships with others that best meet the needs and interests of their students and the availability of partners in the community.

2. Evaluation

   At the conclusion of each field experience, Resource 72, "Community Partnership Evaluation Form (Teacher)", should be used by the community partners and the teacher to record the student's performance. The form may also be used to encourage students to evaluate their own performance and to assess their progress over time. In addition, Resource 73, "Community Partnership Evaluation Form (Student)" may be used by students to indicate their level of satisfaction with the placement, and Resource 74, "Community Partnership Evaluation Form (Community Partner)" may be used by your partners to evaluate students.

3. Recognition of Community Partners

   The services and support provided by partners should be acknowledged with expressions of appreciation from students, teachers and parents. Some ideas for providing recognition include:

   - Hosting special recognition events for partners and/or volunteers (e.g., brunch, lunch).
   - Featuring partners and/or volunteers in the school newsletter or newspaper.
   - Welcoming them into the staff room.
   - Inviting community partners to attend special events in the school.
   - Designing greeting cards at special times of the year.

- Referencing the work of partners during open houses and on parents' night.
- Recognizing the commitment and dedication of community partners through writing about them in the local community paper.
- Presenting all partners with a framed Certificate of Appreciation suitable for hanging in their front office.
- Sending letters of appreciation from students and teachers. Samples:

STUDENT THANK YOU LETTER
(on School Letterhead)

Date

Employer's Official Title
Name of Business/Organization/Individual
Address (including postal code)

Dear Mr./Mrs. _______:

I would like to thank you for providing me with the opportunity to learn more about ________.

(Second paragraph could mention specific skills learned and person(s) who were particularly helpful.)

(The final paragraph should express personal appreciation of the value of the experience.)

Yours sincerely,

Name
Home Address
Telephone No.

SCHOOL/TEACHER THANK YOU LETTER
Community/Business Partners

Dear _________:

We wish to express our sincere appreciation for your involvement as a Partner in Education. We understand the time and commitment necessary in providing students with a real life learning situation. This co-ordinated effort to prepare our students represents an investment that will never stop paying dividends. Our dividend will appear in the form of a more literate society, better prepared employees and a country that is proud of its schools. Thank you for your part in this educational endeavour.

Yours sincerely,

4. Organizing a Career Day

With the cooperation of others (e.g., superintendent, principal(s), community partners) organize a career day. The main purpose of a career day is to bring together speakers and exhibitors from a variety of areas including business, industry, further education and training, and have them make presentations to students and respond to students' questions.

A detailed planning model for organizing a career day is contained in the following resource:

- Organizing an Alberta Career Day: A Guide for Teachers, Counsellors and Administrators, 1986, Alberta Education.

  This resource may be obtained without cost, from:

  Central Support Services
  Alberta Education
  8th Floor, West Devonian Building
  11160 Jasper Avenue
  Edmonton, Alberta
  T5K 0L2
  Telephone: (403) 427-7224

COMMUNITY PARTNERSHIP EVALUATION FORM
(Teacher)

Placement Location ____________________

Employer/Supervisor ____________________

	High Medium Low
	5 ———— 1
1. Partner demonstrates an understanding of role: a. Familiarizes student with the workplace	
b. Introduces student to other workers	
c. Clarifies expectations and standards of performance/ appearance	
2. Partner facilitates an effective learning environment: a. Demonstrates interest in the Integrated Occupational Program	
b. Takes the time needed for consultations	
c. Encourages student's initiative and independence	
d. Provides ongoing feedback – to student	
– to teacher	
e. Encourages new, meaningful learning experiences	
f. Provides necessary resources	
3. Overall evaluation of the placement a. Effective learning environment	
b. Placement meets necessary standards – Health	
– Safety	
c. Organizing commitment to the program	
4. Other Comments ____________________ ____________________ ____________________	

Teacher/Coordinator ____________________ Date ____________

Community Partner ____________________ Date ____________

COMMUNITY PARTNERSHIP EVALUATION FORM
(Student)

1. Do you feel that this experience:

(a) has been of benefit to you?

Yes ___	No ___
How? ______________________	Why not? ______________________
______________________	______________________
______________________	______________________

(b) has helped to prepare you for the world of work?

Yes ___	No ___
How? ______________________	Why not? ______________________
______________________	______________________
______________________	______________________

(c) has expanded your learning opportunities?

Yes ___	No ___
How? ______________________	Why not? ______________________
______________________	______________________
______________________	______________________

2. What difficulties arose?

____

____

____

3. What strengths/abilities did you discover in yourself as a result of this experience?

____

____

____

4. Do you have any suggestions for improving this program?

____

____

____

Placement Location ______________	Date ______________
Employer/Supervisor ______________	Signature ______________ Student

COMMUNITY PARTNERSHIP EVALUATION FORM

(Community Partner)

STUDENT ____________________

COMMUNITY PARTNER _______________

TYPE OF BUSINESS ________________

Period of Partnership
From _____ **to** _____

	PERFORMANCE LEVEL			
	High	**Med**	**Low**	**N.A.**
1. **Career Awareness** (a) Appreciates the nature of the industry/business (b) Identifies variety of jobs/careers in occupational cluster (c) Appreciates the need for job search skills (d) Appreciates the job requirements (e) Dresses appropriately for the job				
2. **Human Relations** (a) Maintains good relations (b) Communicates effectively (c) Practices ethical behaviour (d) Demonstrates dependability (e) Demonstrates interest in area (f) Adheres to work standards (g) Displays a positive attitude (h) Respects the opinions and property of others				
3. **Core Skills** (a) Follows instructions/directions (b) Completes necessary forms (c) Uses metric/imperial measures (d) Demonstrates entry-level math functions (e) Demonstrates entry-level tools and equipment competencies (f) Demonstrates entry-level ability to handle supplies				
4. **Work Skills** (a) Demonstrates appropriate competencies (b) Demonstrates pride in work (c) Demonstrates entry-level sanitation practices (d) Demonstrates entry-level safety practices (e) Shows initiative (f) Shows creative ability (g) Practices effective time management				
5. **Entrepreneurship** (a) Recognizes possible self-employment opportunities				
6. Other Comments				

Teacher: _______ **Student:** ________ **Community Partner:** _________

10. WORK SKILLS

The work skills identified in the *Program of Studies/Curriculum Guide* are generic to each of the courses that comprise the occupational component of the Integrated Occupational Program.

The work skills addressed in each occupational course provide the contexts in which the generic skills described in previous units are learned and reinforced. The work skills expanded upon in each Grade 11 occupational course include:

A. Identification

   1. Lists and describes scope of related jobs
   2. Lists and describes equipment, tools and supplies

B. Equipment, Tools and Supply Usage

   1. Demonstrates safe use of equipment, tools and supplies correctly

C. Work Standards

   1. Works to accepted standards

D. Supply Management

   1. Manages supplies efficiently

E. Work Area Management

   1. Maintains work area in safe and sanitary condition.

RESOURCES

STUDENT RESOURCES

A work skills profile, specific to each occupational course, is included in each student workbook. These profiles of work skills incorporate the generic work skills listed above and are designed to accommodate students' differences in interests, and to provide teachers with the flexibility to select, adapt and further develop course content to meet student needs, interests and resources.

- *Working: Today and Tomorrow* (Canadian Edition). Toronto, Ontario: Irwin Publishing, 1990.

(This text may be used to review, reinforce and apply previously developed concepts, skills and attitudes.)

TEACHER RESOURCES

- Resource 75, "Self-Evaluation Chart: Work Habits"
- Resource 76, "Self-Evaluation Chart: Interpersonal Competencies"
- Community partners.

Suggested resources, specific to each course, are identified in the final section of this document, "Teacher Support Material."

Suggested Activities/Community Partnerships

1. In each Grade 12 occupational course, teachers are encouraged to:
   - review and reinforce the concepts, skills and attitudes addressed in the Grade 10 occupational courses
   - use selected activities from the Grades 10 and/or 11 student workbooks to develop further student competencies
   - plan cooperatively with community partners to ensure that students have opportunities to develop abilities that will enable them to enter the workforce and/or access further education/training (e.g., apprenticeship)
   - provide opportunities for students to acquire both generic and work skills on the job.

   (Note: At the Grade 11 level, a minimum of 30% of the instructional time should be devoted to community partnership activities.)

2. The following resources may be used by students to evaluate their performance on the job:

   - Resource 75, "Self-Evaluation Chart: Work Habits"
   - Resource 76, "Self-Evaluation Chart: Interpersonal Competencies"

SELF-EVALUATION CHART: WORK HABITS

Name: ____________ Date: ____________ Course: ____________

	EVALUATION Excellent → Poor		
Time Management	1	2	3
Arrives on time			
Brings all necessary equipment to class			
Prepares immediately for work			
Performs duties without being asked			
Uses extra time to complete unfinished work			
Considers solutions to problems before asking for assistance			
Completes work on time			
Task Management			
Uses equipment and implements as instructed			
Cleans work area after use			
Performs daily clean-up duties			
Follows lab/class rules and regulations			
Personal Management			
Is well groomed			
Wears clothing appropriate to the task			
Maintains accepted standards of personal and public hygiene			
Safety			
Takes all necessary safety precautions			
Uses appropriate safety devices (clothing, shields, guards, etc.)			

Best Score: 45	Score Attained:
Student's Signature:	Teacher's Signature:

SELF-EVALUATION CHART: INTERPERSONAL COMPETENCIES

COURSE: ______________________________

STUDENT'S NAME: ______________________________

PERIOD COVERED: ______________________________

INTERPERSONAL COMPETENCIES RATING CHART

DIRECTIONS: Check appropriate number to indicate interpersonal competencies during the period noted above. Evaluate only those interpersonal competencies appropriate to this period.

* RATING SCALE:
5 Excellent
4 Very Good
3 Good
2 Fair
1 Poor

5	4	3	2	1		
					CONFIDENCE	– Believes in self; others respect, admire and emulate
					PERSEVERANCE	– Continues to work on difficult tasks until completed
					COMPREHENSION	– Pays attention and "catches on" to ideas/situations
					INITIATIVE	– Finds work to do without being told; is self-motivated; is first one to begin work
					RELIABILITY	– Does tasks assigned, without constant supervision
					TACT	– Is careful not to hurt others' feelings or cause anger
					LOYALTY	– Stands up for personal values and fully supports supervisors
					ENTHUSIASM	– Demonstrates desire to learn and please; eager, earnest, zealous worker
					COOPERATION	– Demonstrates willingness to work as a team member and assist others
					ADAPTABILITY	– Adjusts to changes in schedules, job assignments, supervisors
					SAFETY CONSCIOUS	– Observes safety rules and regulations
					HOUSEKEEPING	– Maintains tools, equipment and work stations
					ORAL EXPRESSION	– States information in a clear, logical order
					SOCIABILITY	– Makes friends easily and is open-minded
					GROOMING	– Dresses appropriately for variety of occasions
					LEADERSHIP	– Gets others to cooperate and channel their efforts toward a common goal
					POISE	– Maintains self-control

SIGNATURE: ______________________________ DATE: ____________________

SUGGESTED TEACHING STRATEGIES

A variety of strategies and sample activities useful in gathering, interpreting, recording, evaluating and communicating ideas in the occupational courses are provided with the suggested activities and student resources included in this manual and in the *Program of Studies/Curriculum Guide*. In addition, the following strategies can be used effectively to support students in their use of language and thought processes in many areas of each of the occupational courses:

- AVID: A Strategy for Transfer
- Brainstorming
- CARE: A Safety Strategy
- CARING: A Listening Strategy
- CROSSWORD PUZZLE: A Comprehension Strategy
- Descriptive Writing: An Evaluation Guide
- First Letter Mnemonic: A Remembering Strategy
- Flow Charting: A Process Analysis Strategy
- Improving the Instructional Environment
- LEEP, CHECK: Oral Presentation Strategies
- A Guide to Effective Listening
- PMI: An Exploration Strategy
- Positive Self-Talk: A Self-Concept Building Strategy
- RAP: A Comprehension Strategy
- Reinforcing the Positive
- SCAMPER: An Idea Generating Strategy
- SCORER: A Test-Taking Strategy
- Speech Evaluation Guide
- SPOT: A Social Problem-Solving Strategy
- SQ3R: A Chapter Attack Strategy
- WIS: A Word Identification Strategy
- Writing Directions: An Evaluation Guide

A more detailed outline of each of the above strategies follows.

AVID: A Strategy for Transfer

Purpose

- to enable students to transfer concepts, skills and attitudes learned in one course to other courses.

Description of Strategy

A: Academics
V: Vocational
I: Interpersonal
D: Daily living

Procedure

After a strategy has been taught directly, students can be shown how to use the 'AVID' mnemonic as an aid for discussing and formulating academic, vocational, interpersonal and daily living applications of the strategy, or the principles derived from the strategy.

For example, organizational strategies initially taught in the academic "A" course may be discussed and applied to the vocational "V" (dress, materials for the job), interpersonal "I" (coming to appointments on time) and daily living "D" (organized room) areas.

Adapted from *SPELT: A Strategies Programme for Effective Learning/Thinking*: Inservice Edition (SPELT International, Ltd.), p. 196. Copyright 1987 by R. Mulcahy, K. Marfo and D. Peat and J. Andrews. Reprinted with permission.

Brainstorming

Purpose

- to generate a large number of ideas that will lead to more creative problem solving
- to open students up to sharing ideas without fear of criticism
- to enable students to build on each other's ideas.

Procedure

1. Teacher states a specific problem or asks an open-ended question such as . . .
    - What other uses could you find for a ___?
    - In what other ways could you improve a ___?
    - List all the things that are soft and white.
2. Give the rules for "brainstorming":
    - Don't judge ideas during the brainstorming stage
    - Provide a safe environment; accept everything. (Evaluation should be done later as a separate follow-up activity.)
    - Encourage "far out" ideas
    - Build (piggyback) on other ideas
    - Don't stop too soon. Initial responses are often easily recalled from memory and usually are followed by a pause or a slowing down of ideas. Beyond this point, students are beginning to think more deeply. Many ideas are needed before really original thinking takes place. Remember, "quantity comes before quality"
    - Everyone should contribute, including the teacher, to demonstrate divergent thinking and to add encouragement.
3. Restate the problem or question and, as students give their responses, record the ideas, without comment.
4. When sufficient ideas have been recorded, then comment on the amount and variety of responses.

CARE: A Safety Strategy

Purpose

- to stimulate students' awareness of the need to follow directions and safe operating instructions in the home, in school, and in the workplace.

Description of Strategy

C – Caution
A – Alertness
R – Responsibility
E – Everyday

Procedure

Students may be asked to:

- brainstorm examples for each letter of the mnemonic to increase the scope of their awareness
- design and produce a poster to display in context the application of the principles of CARE; for example, a student in a crafts and arts course may design a safety graphic and the graphic may be produced by students in a technical crafts course
- give examples of task-related CARE activities students perform in the home, at school and in the workplace.

	CARE Activities
In the home	e.g., ensuring that the cords/wire are not frayed and damaged • • •
At school	e.g., putting on safety equipment (e.g., goggles, gloves, ear protectors) before using power equipment and tools • • •
In the workplace	e.g., frequently removing debris/wastes from the work area • • •

CARING: A Listening Strategy

Purpose

- to improve students' ability to listen effectively.

Description of Strategy

C – Cares about the message
A – Always looks at the speaker
R – Remains comfortably stationed (not fidgeting or moving around)
I – Is quiet (when being spoken to)
N – Notices details (so questions or replies can be formulated)
G – Greets speaker with a clear mind (tries to think only about what's being said).

Procedure

a. During an oral presentation, note situations where students are not attending (i.e., not caring about the presentation, moving about, chattering to each other, working on an assignment). Lead a discussion around what it feels like to talk before a group of people who appear uninterested, and the consequences to both speaker and listener. Then present the "CARING" Strategy.

b. Teach the "CARING" strategy as preparation for an oral presentation unit.

Adapted from *A Strategies Program for Effective Learning and Thinking* (Cognitive Education Project, University of Alberta). Copyright 1987 by B. Mulcahy, K. Marfo and D. Peat. Reprinted with permission.

CROSSWORD PUZZLE: A Comprehension Strategy

Purpose

- to increase students' word recognition ability and their ability to think creatively and sequentially.

Procedure

Step 1: Think of a particular topic and the terms related to that topic (e.g., business – profit, loss, employer, employee, accounts).

Step 2: Write the terms in the grid, interlocking letters as often as possible, going across and down the page.

Step 3: Lay another sheet of paper over the grid and trace only those squares that contain letters. Or, with felt tip marker, fill in unused squares to form a dark background.

Step 4: Number the first square of each word going across and down.

Step 5: Number the "clues" or definitions in the same order in which you numbered them on the grid. (Put clues at the bottom of the page or on a separate sheet of paper.)

Step 6: Have students complete the crossword puzzle.

Crossword Puzzle Grid

Descriptive Writing: An Evaluation Guide

Purpose

- to help students to focus on the components of a descriptive writing assignment.

Procedure

The following evaluation guide is given to students before their assigned writing project or task.

Writing Assignment

Your assignment will be marked using the criteria below. Try answering the questions and marking your assignment yourself; then, revise your work to obtain a better mark.

	Possible Score	My Score
1. Did you list facts and opinions? Have you presented them separately?	4	
2. Is each fact and opinion presented in a full sentence? If you read each sentence separately, can you tell what it means without referring to the others?	4	
3. Are any of your statements not observations? Deduct one mark each time you find: • an opinion • an inference • a belief • a suspicion.	5	
4. Did you collect any quantitative data that can be tabulated? Have you presented these in a data table?		
Be sure your table has:		
• a title	2	
• a heading for each column	3	
• a unit expressed for each.	2	
Total:	20	

Scale Point

- The lists offer little accurate description. The description obtains 0–9 points.
- Accurate description has been provided, but either the format of the presentation is weak or a great deal of irrelevant material – opinions, inferences, beliefs, suspicions – has been included. The description obtains 10–14 points.
- Accurate description has been effectively presented. Data are appropriately tabulated. The description obtains 13–20 points.

Adapted from the *Junior Secondary Science Curriculum Guide and Resource Book* by the British Columbia Ministry of Education. Copyright 1983 by the British Columbia Ministry of Education. Reprinted with permission.

First Letter Mnemonic: A Remembering Strategy

Purpose

- to assist students to remember word lists and other groups of information.

Description of Strategy

F – Form first letters into words (uppercase)
I – Include other letters (lowercase)
R – Rearrange letters
S – Form a sentence
T – Try it many times

Procedure

Step 1: Form first letters into word, using uppercase letters (acronym).

Example: types of questions – Literal, Inferential, Evaluative, Decoding
LIED or DELI

If this step doesn't work, try Step 2.

Step 2: Include other letters (lowercase).

Example: Musical Instruments (Woodwinds).

F	O * r	C	E	P * t	S
Flute	Oboe	Clarinet	English Horn	Piccolo	Saxophone

* Lowercase letters help to form the word (mnemonic), **but do not** stand for a key word.

If this step doesn't work, try Step 3.

Step 3: Rearrange letters.

FOrCEPtS above was formed by rearranging the letters F P C O E S and adding r and t. Step 3 usually follows Step 2 in that for most word lists the first letters do not form a word without some rearrangement. If Step 3 doesn't work, try Step 4.

Step 4: Sentence formation (acrostic).

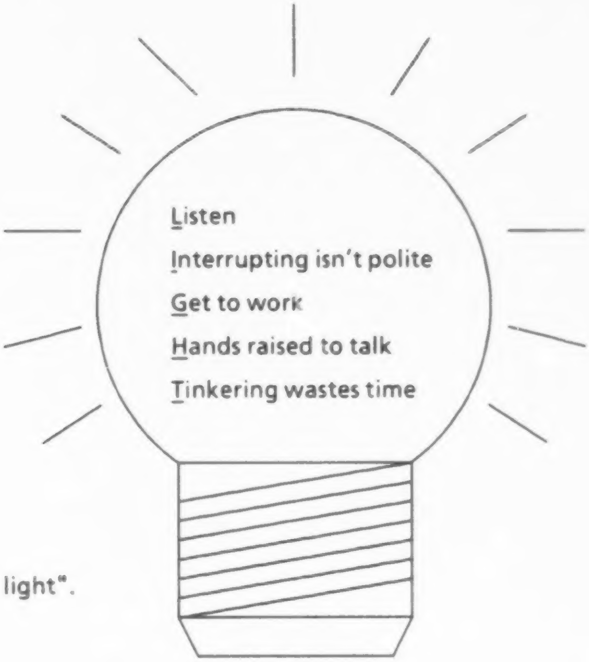
Father	Played	Clarinet	Or	English (horn)	Softly
Flute	Piccolo	Clarinet	Oboe	English Horn	Saxophone

Step 5: Try it many times. This step is a reminder to manipulate letters and words until a mnemonic is formed. Note the use of the word F I R S T as a mnemonic (Form, Include, Rearrange, Sentence, Try) to help remember this strategy.

Suggested Applications

- as a strategy to remember key words that relate to key concepts for an exam (studying strategy)
- to aid retention of strategies generated or taught
- home applications: shopping lists, things to do, etc.
- use first-letter mnemonic strategy to aid students in remembering classroom rules.

  Example: L I G H T Strategy*



Listen
Interrupting isn't polite
Get to work
Hands raised to talk
Tinkering wastes time

"Flip a switch and be bright like a light".

Adapted from *SPELT: A Strategies Programme for Effective Learning/Thinking*: Inservice Edition (SPELT International, Ltd.), pp. 84-85. Copyright 1987 by R. Mulcahy, K. Marfo and D. Peat and J. Andrews. Reprinted with permission.

Flow Charting: A Process Analysis Strategy

Purpose

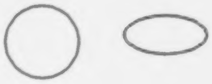
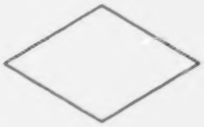
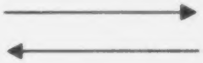
- to enable students to identify the order and sequence of steps in a procedure or process.

Description of Strategy

Students are taught to analyze the process involved in completing a task by constructing a flow chart that enables them to break the process into sequential steps, which then can be followed to complete the task.

A flow chart consists of a set of symbols connected by lines, which usually illustrate the sequential progression of steps involved in a procedure or activity.

Symbols used are:

A circle or an oval		start, stop
A diamond		question, decision
A rectangle		action
An arrow		directional lines

Procedure

1. Provide students with a task or have them identify a task.
2. Identify the components of the task.
3. List the components in sequence.
4. Draw a flow chart to show the major components of the task in sequence.

Improving the Instructional Environment

Purpose

- to enhance students' learning by improving the instructional environment.

The instructional environment plays a vital role in the development of creative thinking. Creative thinking can be fostered by:

- using appropriate questioning techniques
  - open-ended questions, ambiguous problems (e.g., find 1000 of something)
- providing with openness
  - respect, acceptance and delight in unusual ideas
- providing enrichment activities
  - exciting materials that stimulate thinking
- allowing time for production
  - frequent opportunities for creative production
- providing time for idea development
  - to play, experiment, suppose, test, question, guess and expand the boundaries of conventional thought.

Description of Strategy

- **Affective Skill Development**

  A stimulating instructional environment accommodates the development of the affective skills which are the "feeling processes" of productivity. These affective skills are:

  CURIOSITY – the knack of wondering or puzzling.
  You are curious when:
  - you take a ____ apart to see what is inside
  - you ask "Why ...?"
  - you wonder "What if ...?"

  RISK TAKING – the courage to attempt something that may leave you open to criticism.
  You are a risk taker when:
  - you make a guess
  - you experiment
  - you try something new.

  COMPLEXITY – seeking an easier method; organizing; ordering.
  You are showing a preference for complexity when:
  - you set up an assembly line to make ____
  - you make up a schedule
  - you plan and organize a ____.

  IMAGINATION – visualizing, building images in the mind.
  You are using your imagination when:
  - you picture the setting of a story
  - you fantasize about the outcome of ___
  - you daydream.

- **Cognitive Skill Development**

The cognitive skills are the thinking processes of creativity. These are skills that can be taught, practised and applied in other areas of the curriculum. It is important to remember that creative thinking is a complex process which combines both the cognitive and affective skills. The following cognitive skills may be developed in each of the thematic learning activities:

FLUENCY – the ability to think of many possibilities.
You are being fluent when:

- you can list many ways to ____
- you can think of several ideas for ____
- you can think of more than one solution for ____.

FLEXIBILITY – the ability to shift directions of thought.
You are being flexible when:

- you can examine an issue from more than one viewpoint
- you can find other uses for a ____
- you can find different kinds of reasons to ____.

ELABORATION – the ability to stretch an idea to make it more interesting.
You are elaborating when:

- you add details and imagery to your story
- you add pictures, maps or tables to make a point clearer
- you add supplementary ideas to a main idea.

ORIGINALITY – the ability to express unusual alternatives.
You are being original when:

- you make something quite different from everyone else
- you can think of a new way to do something
- you think of an idea nobody else thought of.

From *Education Plus: Sample Lessons in Creative Thinking*. Copyright 1986 by the Education Plus Team, Calgary Catholic Schools. Reprinted with permission.

LEEP, CHECK: Oral Presentation Strategies

Purpose

- to provide students with memory cues when making oral presentations.

Description of Strategies

LEEP
L – Loud and clear
E – Expression
E – Eye contact
P – Posture

CHECK
C – Checking the audience
  - Is everyone ready to listen?

H – Having eye contact with the audience
E – Expressive
C – Clear
  - Make sure you speak so that everyone can understand your words

K – Keen to be heard
  - Show you're interested in what you're saying; be enthusiastic!

Teaching example

Reinforce the use of LEEP or CHECK by integrating it into your marking scheme when presentations are made to the class. Reinforce to students that whenever they're speaking to others, whether in a group or individually (party, playground, dinner table, etc.), the same principles apply.

Adapted from *SPELT: A Strategies Programme for Effective Learning/Thinking*: Inservice Edition (SPELT International, Ltd.), pp. 128-129. Copyright 1987 by R. Mulcahy, K. Marfo and D. Peat and J. Andrews. Reprinted with permission.

A Guide to Effective Listening

Purpose

- to enhance students' listening ability.

Procedure

Provide each student with a copy of the listening guide below to use as preparation for listening to an oral presentation by a guest speaker or class member. Have students use their responses to the questions as a basis for later class discussions.

Use this guide as you listen to spoken presentations in class. When you have become familiar with it, you may wish to create your own personal listening study guide.

1. What is the general subject of this talk?
2. What is the specific occasion? (Give name of class, speaker's name and date.)
3. What is the chief point or main message? (This may be answered *after* the talk.)
4. What organizational plan does the speaker follow? (Is it enumeration? Comparison and contrast? Cause and effect? Generalization plus examples? A time or sequence pattern? Is it a mixture of patterns?
5. What transitional expressions does the speaker use?
6. Does the speaker digress from the main point?
7. In what ways do you differ with the speaker?
8. What interested you the most? The least?
9. What is your personal reaction to the main point of the talk?
10. Write the speaker's main point in three or fewer sentences.

The following questions may also be used to stimulate discussion on the importance of effective listening skills:

- What helps you listen in class? At home? In the work place?
- What prevents you from listening?
- How do you know when it is important for you to listen?
- What do you do to make yourself listen when you know you should, but you are really don't want to?

Adapted from *Listening Skills Schoolwide*. Copyright 1982 by T.G. Levine, NCTE. Reprinted with permission.

PMI: An Exploration Strategy

Purpose

- the PMI strategy is designed to aid students to explore a subject systematically and in depth, rather than just to support their position. Students are instructed to direct their attention to the "Plus" (P) aspects, then the "Minus" (M) aspects and, finally, the "Interesting" (I) aspects. The strategy also allows students to view how others think.

Procedure

1. A topic for discussion is assigned or arises during classroom dialogue.

2. Students are divided into small groups (of three or four) and instructed to divide a page in their workbooks into three columns and label them P, M, and I.

3. They are directed to think first about "Plus" (P) points regarding the discussion topic, and to write these points in the 'P' column. The same procedure is followed, in order, for the "Minus" (M) column and the "Interesting" (I) column. All points raised are to be accepted without judgment.

4. The points raised in the small groups are shared with the whole class.

Suggested Applications

1. This strategy can be used as a way to self-analyze and evaluate the present strategy used by the pupils. For example, the assigned topic could be "Do a PMI on the use of RAP strategy during the reading lesson we just completed". This analysis, with the whole class, should lead to modification of the strategies as your students apply them to various situations and settings.

2. Additionally, the PMI strategy could be used to assist pupils to think systematically and evaluate their positions in other domains (academic discussion topics, social domains, etc.).

Adapted from deBono's CORT (1983). From *A Strategies Program for Effective Learning and Thinking* (Cognitive Education Project, University of Alberta). Copyright 1987 by B. Mulcahy, K. Marfo and D. Peat. Reprinted with permission.

Positive Self-Talk: A Self-Concept Building Strategy

Purpose

- to assist students to enhance their self-esteem.

Procedure

1. Present your class with an assignment that is challenging for all students. As they attempt to complete the work, use verbal praise, directed toward the efforts being shown. Phrases such as "You can do it." "You're really trying hard." should be used. Circulate around the room to document overt student comments. Mid-way through task completion, stop the students in order to discuss:
    - why you were using praise as a motivation
    - your observation of their overt speech (if they were speaking to themselves, what were they saying?).

2. Guide the discussion toward the goal of understanding that, just as teachers use praise as a tool to motivate students, so individuals can use positive self-talk as a strategy to motivate themselves. Through the use of positive self-talk they can redirect their attention **away from** self-criticism, feelings of incompetence and expecting to fail, **toward** the learning task at hand.

Suggested Follow-up Activities

Whenever students appear stressed, remind them (in a whisper) to monitor their thoughts and to use overt positive self-talk. In-class test preparation periods are ideally suited to this.

If students lack a positive vocabulary, spend time brainstorming with them to create a "master list" of positive phrases for their use.

Adapted from *SPELT: A Strategies Programme for Effective Learning/Thinking*: Inservice Edition (SPELT International, Ltd.), p. 217. Copyright 1987 by R. Mulcahy, K. Marfo and D. Peat and J. Andrews. Reprinted with permission.

RAP: A Comprehension Strategy

Purpose

- to help students develop a strategy to improve their ability to comprehend written text.

Description of Strategy

R – Read
A – Ask
P – Put

Procedure

Have students:

1. Read the paragraph or instructions.
2. Ask themselves what they have just read.
3. Put the material they have just read into their own words.

Adapted from *SPELT: A Strategies Programme for Effective Learning/Thinking*: Inservice Edition (SPELT International, Ltd.), pp. 145-147. Copyright 1987 by R. Mulcahy, K. Marfo and D. Peat and J. Andrews. Reprinted with permission.

Reinforcing the Positive

Purpose

- to enhance IOP students' self-esteem.

Procedure

Carefully observe individual student behaviours and, at every opportunity, reinforce correct and positive behaviour with words of praise. The following list provides 99 ways to say, "You did a good job".

1. SUPER GOOD!
2. You've got it made.
3. SUPER!
4. That's RIGHT!
5. That's good.
6. You're really working hard today.
7. You are very good at that.
8. That's coming along nicely.
9. GOOD WORK!
10. That's much better!
11. I'm happy to see you working like that.
12. Exactly right.
13. I'm proud of the way you've worked today.
14. You are doing much better today.
15. You've just about got it.
16. That's the best you have ever done.
17. You're doing a good job!
18. THAT'S IT!
19. Now you've figured it out.
20. That's quite an improvement.
21. GREAT!
22. I knew you could do it.
23. Congratulations!
24. Not bad.
25. Keep working on it, you're improving.
26. Now you have it!
27. You are learning fast.
28. Good for you!
29. Couldn't have done it better myself.
30. You are a joy.
31. One more time and you'll have it.
32. You really make my job fun.
33. That's the right way to do it.
34. You're getting better every day.
35. You did it that time!
36. You're on the right track now!
37. Nice going.
38. You haven't missed a thing.
39. WOW!
40. That's the way!
41. Keep up the good work.
42. TERRIFIC!
43. Nothing can stop you now.
44. That's the way to do it!
45. SENSATIONAL!
46. You've got your brain in gear today.
47. That's better.
48. That was first-class work.
49. EXCELLENT!
50. That's the best ever!
51. You've just about mastered that.
52. PERFECT!
53. That's better than ever.
54. Much better!
55. WONDERFUL!
56. You must have been practising.
57. You did that very well.
58. FINE!
59. Nice going.
60. You're really going to town.
61. OUTSTANDING!
62. FANTASTIC!
63. TREMENDOUS!
64. That's how to handle that!
65. Now that's what I call a fine job.
66. That's great.
67. Right on.
68. You're really improving.
69. You're doing beautifully.
70. Superb!
71. Good remembering!
72. You've got that down pat!
73. You certainly did well today.
74. Keep it up!
75. Congratulations! You got it right.
76. You did a lot of work today!
77. Well, look at you go!
78. That's it!
79. I'm very proud of you.
80. MARVELLOUS!
81. I like that.
82. Way to go!
83. Now you have the hang of it.
84. You're doing fine.
85. Good thinking!
86. You are really learning a lot.
87. Good going.
88. I've never seen anyone do it better.
89. Keep on trying!
90. You outdid yourself today.
91. Good for you!
92. I think you've got it now.
93. That a good (boy/girl).
94. Good job, (student's name).
95. You figured out that fast.
96. You remembered!
97. That's really nice.
98. That kind of work makes me happy.
99. It's such a pleasure to teach when you work like that!

SCAMPER: An Idea Generating Strategy

Purpose

- to assist students to think creatively.

Description of Strategy

S – Substitute
C – Combine
A – Adapt
or A – Add
M – Magnify
or M – Minify
or M – Modify
P – Put to other uses
E – Eliminate
R – Rearrange

Procedure

Students are encouraged to use each letter of the mnemonic to generate answers to related questions.

SUBSTITUTE
- Who else can do this?
- Can another source of power, another person or place, be used instead?
- Can another ingredient or material be used?
- Can something else be used in place of one of the parts?

COMBINE
- Can parts of ideas be combined?
- Can purposes or uses be combined?
- Can functions or objectives be combined?

ADAPT
- What other ideas does it suggest?
- What can you copy, making some changes?
- What can you imitate?

ADD
- Add more details.
- Add another just like it.
- Add more parts, pieces.

MAGNIFY
- What would it be like if it were made bigger?
- Can you increase the time, strength or value?
- What would it be like if you increased the number?

MINIFY
- What would it be like if it were smaller?
- Can it be made lighter, lower, cheaper?
- What if it became rare?

MODIFY

- Change the colour, shape or materials.
- Can you change the function, purpose or condition?
- What new twists can be made?

PUT TO OTHER USES

- Can it be put to another use?
- Can you modify it for another use?
- Can you find something else to use in its place?

ELIMINATE

- Remove some of the parts or characters.
- Eliminate some of the functions, materials or uses.
- Remove the beginning or end.

REARRANGE

- Can you interchange parts?
- Can you rearrange the pattern or plan?

Adapted from *Education Plus: Sample Lessons in Creative Thinking*. Copyright 1986 by the Education Plus Team, Calgary Catholic Schools. Reprinted with permission.

SCORER: A Test-Taking Strategy

Purpose

- to prepare students to take exams that include written questions and/or instructions.

Description of Strategy

S – Schedule time
C – Identify clue words
O – Omit difficult questions
R – Read directions
E – Estimate answers
R – Review

Procedure

This strategy is designed to aid students to approach test taking systematically.

1. **S – Schedule** your time. The student must consider:
   a. How many questions are there?
   b. What are the weightings of the various questions?
   c. Which questions are easy, difficult, fast, etc.? The time needed to complete each section should then be estimated (e.g., a multiple choice test of 120 questions with a one hour time limit is: 60/120 = .5 minutes per question).
2. **C – Clue words**. Most exam questions have built-in clues. Use them.
3. **O – Omit** the difficult questions. The following procedure is suggested to aid the students in this step.
   a. Move quickly through the test on the first pass: don't daudle; keep moving.
   b. When a question appears easy or you're certain of the answer – answer it.
   c. On the first pass, skip those questions that appear difficult. When a question is missed, mark the margin with a symbol (+ or ✓) to show that you need to come back to it.
   d. When the easy and certain questions are answered, return to those skipped and marked with a symbol, and try again.
   e. If you still are unable to answer on the second pass, mark the questions again by changing the "+" to "++" or ✓ to "✓ ✓". Keep moving.
4. **R – Read** the directions for the test and for each test question very carefully.
5. **E – Estimate** your answers. This could have two meanings, according to the type of test question:
   a. Those involving calculations or problem solving – roughly estimate the "ball park" figure.
   b. Multiple choice – take an educated "guestimate" at a possible answer if you are unable to answer the question on the third pass. Never leave questions unanswered unless you will be penalized for wrong answers.

6. **Review**:

   a. Use every minute available to you. Return to the double checked (+ + or ✓ ✓) difficult questions first. Look for new clue words and hints. Next, review the single checked (+ or ✓) questions, and, finally, if there is time, the unchecked ones.
   b. Only change answers if you have a good reason to do so.
   c. Be sure all questions are answered.
   d. Make certain that your name is **printed** on all separate sheets.

Adapted from *SPELT: A Strategies Programme for Effective Learning/Thinking*: Inservice Edition (SPELT International, Ltd.), pp. 162-163. Copyright 1987 by R. Mulcahy, K. Marfo and D. Peat and J. Andrews. Reprinted with permission.

Speech Evaluation Guide

Purpose

- to enable students to recognize the components of a good oral presentation and to enhance their ability to make oral presentations. The main purpose of oral presentations is to get students to develop self-confidence in talking in front of a group. They must try to establish a comfortable rapport with the group and control signs of nervousness! Choosing a topic they know a lot about, and being well prepared, will get them "off the hook" so they can work on the main purpose.

Procedure

In consultation with each student, decide on a topic and a date for an oral presentation. Encourage students to research their topic and practise their presentation. Have students use the speech evaluation guide to provide feedback to presenters.

SPEECH EVALUATION GUIDE

Speaker's Name: ____________________

Topic: ____________________

Date: ____________________ Time: ____________________ (minutes)

	Yes	Needs Improvement
1. The speaker was adequately prepared for the talk. Comment: ____________________	______	______
2. There was a definite opening, body and conclusion to the talk. Comment: ____________________	______	______
3. The speaker attempted to make eye contact with the audience. Comment: ____________________	______	______
4. The speaker was able to control nervousness in front of the class. Comment: ____________________	______	______
5. The speech was audible and clear to all listeners. Comment: ____________________	______	______
6. The speaker used notes or cards discretely so as not to interfere with the main purpose of the speech. Comment: ____________________	______	______

Comment on the speaker's strongest point. ____________________

Give one or two specific suggestions for improvement. ____________________

SPOT: A Social Problem-Solving Strategy

Purpose

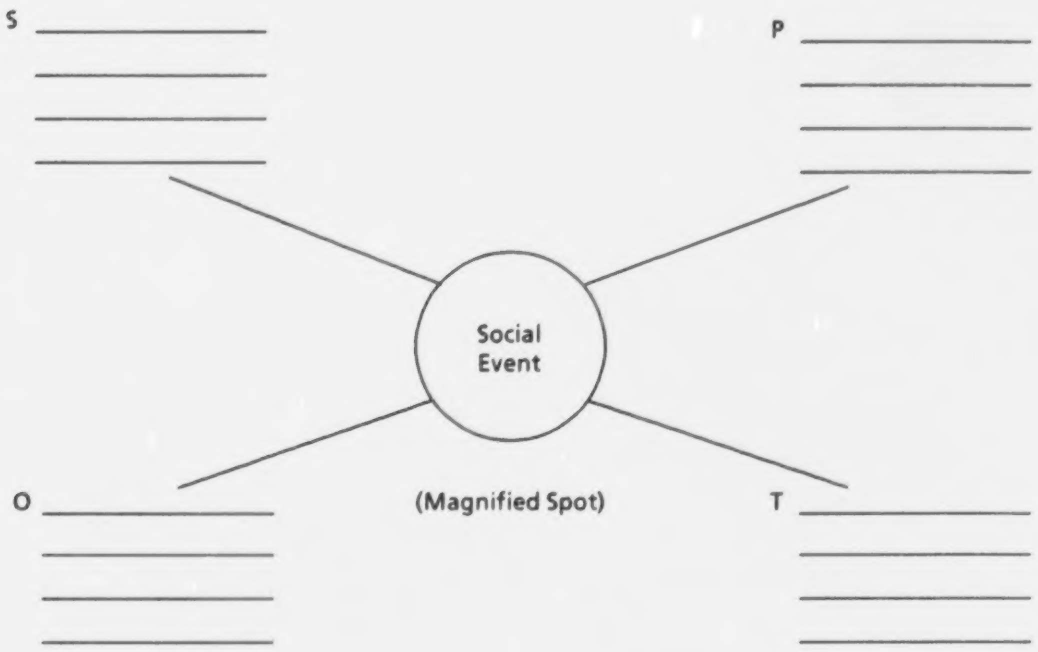
- to assist students to recognize and to analyze systematically a social situation before it becomes a social problem.

Description of Strategy

S – Setting: Who? What? Where? When?
P – Problem: What's the situation to be solved?
O – Order of action: What happened?
T – Tail end: What can be done next time?

Procedure

Problem-Solving Chart:



Adapted from *SPELT: A Strategies Programme for Effective Learning/Thinking*: Inservice Edition (SPELT International, Ltd.), p. 174. Copyright 1987 by R. Mulcahy, K. Marfo and D. Peat and J. Andrews. Reprinted with permission.

SQ3R: A Chapter Attack Strategy

Purpose

- to enable students to use a systematic approach to reading and comprehension.

Description of Strategy

S – Survey
Q – Question
3R – Read, recite, review

Procedure

1. Survey – quickly read:
    a. chapter introduction (beginning)
    b. chapter summary (end)
    c. first sentence in each paragraph
    d. visual aids (pictures, graphs, diagrams).
2. Question – ask a question based on each sub-title.
3. Read – read each section to find the answer to your question.
4. Recite – write down the answer.
5. Review – say or write a summary of what you've learned.

Adapted from *SPELT: A Strategies Programme for Effective Learning/Thinking*: Inservice Edition (SPELT International, Ltd.), p. 178. Copyright 1987 by R. Mulcahy, K. Marfo and D. Peat and J. Andrews. Reprinted with permission.

WIS: A Word Identification Strategy

Purpose

- to enable students to read new words.

Procedure

1. Choose a sentence containing a difficult word with which you are not familiar. Attempt to guess what it means by reading the words around it.
2. Look for a prefix. Look at the beginning of the word. Say it.
3. Look for a suffix. Look at the end of the word. Say it.
4. Locate the stem. Look at what's left after locating the prefix and the suffix.
5. Attack the stem by:
   a. Using the rule of 2's and 3's. If the stem starts with a vowel, say it with 2 letters; if with a consonant, say it with 3 letters.
   b. Two vowels together sound like one – try both sounds.
6. Look it up in a dictionary, or
7. Ask someone.

Writing Directions: An Evaluation Guide

Purpose

- to enable students to write and evaluate a project plan.

Procedure

Have students write and evaluate a project plan before proceeding with the project.

PROJECT PLAN EVALUATION		
	Possible Score	**My Score**
1. The title is present and gives an indication of the purpose of the directions. An example might be, "How to Fly a Kite".	2	
2. Supplies and equipment are all identified and correctly classified.	2	
3. The instructions are listed:		
• in complete sentences	3	
• in the correct sequence	4	
• without any omissions	4	
• in a numbered order	2	
• using present tense	2	
• without addressing "you".	1	
4. Safety hazards, if they exist, are identified and noted in the appropriate location.	2	
5. The overall organization is easy to follow.	5	
Total	25	

Scale Point

0-10 The directions are incomplete and/or in an inappropriate format.

11-15 There are serious problems with format and there may be omissions.

16-19 The instructions are logical although there may be some weaknesses in format.

20-25 A clear set of directions is presented in a standard format.

Adapted from the *Junior Secondary Science Curriculum Guide and Resource Book* by the British Columbia Ministry of Education. Copyright 1983 by the British Columbia Ministry of Education. Reprinted with permission.

INTEGRATED OCCUPATIONAL PROGRAM: OCCUPATIONAL COMPONENT

TEACHER SUPPORT MATERIAL

COURSE SEQUENCE, CREDITS AND CERTIFICATE REQUIREMENTS

The occupational component of the Integrated Occupational Program consists of twenty occupational course sequences. The following chart shows the sequence and credit value of each course and the minimum number of occupational courses required to obtain the Certificate of Achievement.

Grade	10	11	12
Sequence	16	26	36
Credits	3 or 5	10	10
Minimum number of courses	2 × 5 credit 4 × 3 credit	2	1

COURSE OBJECTIVES

The objectives of each 26-level occupational course are:

- to develop students' personal and interpersonal skills
- to increase students' awareness and appreciation of employment and entrepreneurial opportunities
- to orient students to employment conditions
- to develop students' knowledge and skills.

COURSE OVERVIEWS

Each 26-level occupational course orients students to related occupations. There are two dimensions to each course:

1. Generic skills (i.e., concepts, skills and attitudes)

2. Work skills (i.e., occupation specific knowledge and skills).

The generic skills outlined as learning objectives in column one of the *Program of Studies/Curriculum Guide* are common to all 26-level occupational courses. Acquisition of the generic competencies identified as desirable at the Grade 11 level will provide students with a firm foundation on which to build a body of knowledge, skills and attitudes that is conducive to a variety of employment opportunities.

The work skills for each course are outlined in the scope and sequence charts in the *Program of Studies/Curriculum Guide* and in the profile in each student workbook. Teachers are advised to use the work skills as the context in which to teach the generic components of each course. Teachers are encouraged to supplement, complement and adapt the sequence of each set of work skills to suit the needs of their students, the availability of facilities and the opportunities for community partnerships.

CONTENT SEQUENCE: REQUIRED AND ELECTIVE COMPONENTS

The content of each occupational course is outlined in the generic and work skills learning objectives. Both sets of objectives are designed to meet the needs, interests and differences of individual students. Teachers should plan to engage students in activities designed to achieve the learning objectives outlined in the *Program of Studies/Curriculum Guide* and allow time for enrichment or remediation.

Students' interests and abilities will determine largely how the elective time will be addressed. Opportunities exist for experimenting with organizational and instructional strategies that are appropriate to students' developmental stages and different learning styles to facilitate improved teaching/learning opportunities and environments.

The instructional time for each occupational course should be apportioned:

- 80 percent required
- 20 percent elective.

Elective extension and enrichment activities may include:

- designing and implementing a more complex project
- planning and organizing additions to the service components of the course
- developing increased levels of competency in performing specific work skills
- decreasing the amount of time required to perform specific work skills
- using higher levels of quality control specifications to evaluate a product or a service
- initiating small group, class and community projects
- coordinating and maintaining a record of partnership activities
- participating in in-school and community volunteer agencies.

Elective remedial activities may include:

- reviewing the content from the related 16-level occupational course in which the student appears weak
- relating new learning objectives to present life skills
- breaking a job into the smallest task units possible or necessary to enable the student to achieve incremental successes
- having more able students work with one or more peers to provide guidance, assistance and support
- using community partners as mentors for individual students.

COMMUNITY PARTNERSHIPS

Community partnerships are a required component in each occupational course. In-school and off-campus exposure to the world of business and industry will increase student understanding of and commitment to essential concepts, skills and attitudes outlined for each course. In addition, the development of school-community partnerships increases community members' awareness of the educational process and enhances students' employment opportunities as part-time employees and as full-time employees upon graduation from high school.

STUDENT WORKBOOK

A student workbook has been developed for each occupational course. The contents of the workbook match the skills indicated in the profile contained in each workbook as Appendix 1.

Teachers are encouraged to supplement and adapt the sequence of instructional units to meet the needs and interests of students, taking into consideration the availability of facilities, and the opportunities for community partnerships.

INTEGRATION

Each course in the occupational component of the Integrated Occupational Program contains material that is directly related to learnings contained in the core subject area profiles.

All teachers of the Integrated Occupational Program are encouraged to work closely with one another in both their instructional planning and delivery. The reinforcement of learning through integrated course development, integrated lesson planning and integrated delivery, will enable students in the Integrated Occupational Program to be better prepared to respond to the demands of schooling and better equipped for entry into the work force.

INSTRUCTIONAL FORMAT

Each 26-level occupational course is designed to be a hands-on course of instruction. Theoretical components, usually associated with instruction in similar areas, have been minimized.

While many of the generic skills and work skills (concepts, skills and attitudes) may be developed in a lab/classroom environment, student learning will be maximized through using community partnerships at every opportunity. Partnerships include in-school demonstrations and presentations, field trips, mentorships, as well as student placements in related work areas.

The greater the degree of parental and community involvement, the greater and more meaningful the learning experiences of the student are likely to be.

GENERAL INSTRUCTIONAL GUIDELINES

1. Assess the entry level of each student.
2. Identify the unique exit-level competencies appropriate for each student.
3. Recognize the need for each student to experience success in completion of even the smallest task.

4. Use evaluation checklists to provide regular feedback to students.

5. Be flexible; use the *Program of Studies/Curriculum Guide* and the *Student Workbook* to prepare your instructional plan. Modify the sequence and scope of the work skills to meet the needs of individual students.

6. Establish and use community partnerships whenever and wherever possible.

EVALUATION

Students should be provided with multiple opportunities in which to experience success. Whenever possible, teachers are encouraged to provide students with reinforcement for positive and correct behaviour. Two generic evaluation instruments, which have applicability across occupational course areas, are included in the pages that follow.

- Monthly Feedback and Evaluation Report
- Student Behaviour and Performance: Rating Chart.

Additional evaluation instruments may be found in each student workbook and in previous sections of this manual.

Wherever possible, students should be encouraged to evaluate and to provide constructive feedback on their own performance and on the performance of their peers.

INTEGRATED OCCUPATIONAL PROGRAM

MONTHLY FEEDBACK AND EVALUATION REPORT

Course: ________________________ Teacher's Name: ________________

Report for Month of: ________________

Student's Name: ____________________ Monthly Rating: ________________

Rating Scale: 0 – Unsatisfactory .5 – Poor 1 – Satisfactory
1.5 – Good 2 – Excellent

CRITERIA	COMMENTS	EVALUATION
1. Attends regularly		0 .5 1 1.5 2
2. Is punctual		0 .5 1 1.5 2
3. Is prepared for work		0 .5 1 1.5 2
4. Demonstrates task commitment		0 .5 1 1.5 2
5. Develops good working relationships with others		0 .5 1 1.5 2
6. Displays a positive attitude toward subject matter		0 .5 1 1.5 2
7. Performs all duties and assignments		0 .5 1 1.5 2
8. Understands instructions and follows directions		0 .5 1 1.5 2
9. Demonstrates a professional attitude		0 .5 1 1.5 2
10. Demonstrates responsibility		0 .5 1 1.5 2

STUDENT BEHAVIOUR AND PERFORMANCE: RATING CHART

HIGH 5	MEDIUM 3	LOW 0
A. Contributes to class discussion		
1. Contributes frequently.	1. Contributes occasionally.	1. Contributes very seldom.
2. Gives good pertinent answers and suggestions.	2. Gives answers that are fairly good and relevant.	2. Rambles from subject.
3. Supports answers.	3. Cannot always support or justify answers.	3. Seldom able to support or justify decision.
B. Individual independent or resourceful		
1. Asks for little assistance until some attempt has been made to solve problem.	1. Expects considerable assistance with each problem.	1. Wants to be told what to do next.
2. Asks good questions.	2. Asks fair questions.	2. Asks poor questions.
3. Voluntarily examines reference materials.	3. Makes some use of illustrative matter and reference materials.	3. Unable to use illustrative and reference materials.
C. Demonstrates knowledge, skills and attitudes		
1. Knows the meaning of courtesy and service.	1. Needs to be reminded of the meaning of courtesy and service.	1. Is unaware of what it means to be courteous and to give service.
2. Demonstrates good service skills.	2. Demonstrates fair service skills.	2. Demonstrates poor service skills.
3. Appreciates the importance of good service.	3. Shows some appreciation for the importance of good service.	3. Shows no appreciation for good service skills.

TEACHER SUPPORT MATERIAL

AGRICULTURAL MECHANICS 26

COURSE SEQUENCE

Agricultural Mechanics 26 is the intermediate course in the Agricultural Mechanics 16-26-36 sequence. This sequence is one of three occupational courses that comprise the agribusiness occupational cluster.

Agricultural Mechanics 26 enables students to explore many aspects of agricultural mechanics and its related businesses. Students who indicate a strong desire or interest in pursuing jobs in the areas of agricultural mechanics or agribusiness should be encouraged to explore related courses such as agricultural production, horticultural services and automotive services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the agricultural mechanics sequence and consider complementing it with one or more related course sequences.

ENTRANCE REQUIREMENT

Students taking Agricultural Mechanics 26 must have satisfactorily completed Agricultural Mechanics 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

The activities of this program may be experienced in a combination of the following locations:

- a classroom
- a mechanics workshop
- a welding shop
- a carpentry shop
- a farm
- a local agribusiness or farm service and supply outlet.

Teachers are encouraged to establish, use and monitor community partners who will provide students with on-the-job instruction, under a teacher's supervision, for the majority of the Agricultural Mechanics 26 course.

The following tools and equipment are suggested for teaching Agricultural Mechanics 26. If major items of equipment are not available, the use of a community partner is suggested.

arc welding units and attachments
assorted common hand and power tools
assorted shop cleaning equipment
compressed air supply
exhaust extraction system
fire safe storage cabinets
fire safe garbage cans
framing squares
measuring tapes
oxyacetylene welding units and attachments
painting equipment
pressure washer

project storage area
rope and pulley arrangements
small engines
soldering equipment
solvent tanks
supplies storage area.

OTHER LEARNING RESOURCES

Agricultural Mechanics. Oklahoma State Board of Vocational and Technical Education, 1977.

South, P. *Basic Blueprint Reading.* Mississippi State University, 1983.

Grimes, L.A. Jr. *Building Maintenance Repairer.* University of Texas at Austin, 1984.

Scott, Foy, Schwendu. *Drafting Fundamentals.* Glenco Publishing Inc., 1985.

Farm Machinery Safety. Canada Safety Council.

Farm Welding (Agdex 785). Alberta Agriculture, 1985.

W. Weiss. *Home Maintenance* (2nd ed.). Glenco Publishing Inc., 1983.

How to Read House Construction Drawings (Homedex 1700-41). Alberta Agriculture, 1985.

Replacing Farm Equipment (Agdex 825-18). Alberta Agriculture, 1984.

Service and Repair Instructions. Briggs and Stratton Corp., 1983.

Small Engine (Program Materials). American Association for Vocational Instructional Materials, 1979.

Small Engine Service Manual. Technical Publications Div., Intertec Publications Corp., 1978.

Trac Common Core: *Oxyacetylene Cut and Weld.* Province of British Columbia, Ministry of Advanced Education, 1978.

McDonnell, L. and Kaumecheiwa, A. *The Use of Power Tools.* Delmar Pub. Inc., 1980.

Vocational Agriculture I. Oklahoma State Board of Vocational and Technical Education, 1984.

Vocational Agriculture II. Oklahoma State Board of Vocational and Technical Education, 1986.

Other materials may be available from:

Agriculture Canada
Contact: Communications Branch
Agriculture Canada
930 Carling Avenue
Ottawa, Ontario K1A 0C7

Canada Safety Council
Contact: Canada Safety Council
1765 St. Laurent Blvd.
Ottawa, Ont. K1G 3V4

Farm Association Inc.
Contact: Unit 22
340 Woodlawn Road W.
Guelph, Ont. N1H 7K6

Also: Farm equipment manufacturers
Tool and equipment manufacturers.

Additional related audio-visual resources are available from:

ACCESS NETWORK
Contact: ACCESS NETWORK
16930 - 114 Ave
Edmonton, AB T5M 3S2

National Film Board of Canada
Contact: 222 - 1 street, S.E.
P.O. Box 2950, Station M
Calgary, AB T2P 3C3

Contact: Centennial Building
10031 - 103 Ave
Edmonton, AB T5J 0G9

TEACHER SUPPORT MATERIAL

AGRICULTURAL PRODUCTION 26

COURSE SEQUENCE

Agricultural Production 26 is the intermediate course in the Agricultural Production 16-26-36 sequence. This sequence is one of three occupational courses that comprise the agribusiness occupational cluster.

Agricultural Production 26 orients students to a major area of the agricultural industry. Students who indicate a strong desire or interest in pursuing jobs in this industry should be encouraged to explore the related courses of horticultural services and agricultural mechanics.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the agricultural production sequence and consider complementing it with one or more related course sequences.

ENTRANCE REQUIREMENT

Students taking Agricultural Production 26 must have satisfactorily completed Agricultural Production 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

The activities of this program may be experienced in a combination of the following locations:

- in a classroom
- in a school horticultural lab
- on a farm
- in a local agribusiness or farm service and supply outlet.

Teachers are encouraged to develop, use and monitor community partners to provide students with on-the-job instruction, under a teacher's supervision, for the majority of the Agricultural Production 26 course.

OTHER LEARNING RESOURCES

A wide assortment of resources and resource catalogues may be obtained from the following agencies:

ACCESS NETWORK
Contact: ACCESS NETWORK
16930 – 114 Avenue
Edmonton, Alberta T5M 3S2

Agriculture Canada
Contact: Communications Branch
Agriculture Canada
930 Carling Avenue
Ottawa, Ontario K1A 0C7

(See pages 313–315 for a listing of free publications.)

Alberta Agriculture
Contact: Print Media Branch
Alberta Agriculture
7000 – 113 Street
Edmonton, Alberta T6H 5T6
OR
Alberta Agriculture's District Offices

Alberta Wheat Pool
Contact: Box 2700
505 – 2nd Street, S.W.
Calgary, Alberta N1H 1A8

Beef Information Centre
Contact: 238, 2116 – 27 Avenue, N.E.,
Calgary, Alberta T2E 7A6

Canada Safety Council
Contact: Canada Safety Council
1765 St. Laurent Blvd.
Ottawa, Ontario K1G 3V4

Crop Protection Institute of Canada
Contact: 710 – 116 Albert Street
Ottawa, Ontario K1P 5G3

Farm Safety Association Inc.
Contact: Unit 22
340 Woodlawn Road W.
Guelph, Ontario N1H 7K6

Health and Welfare Canada
Contact: Health Protection Branch
425 – 75 Combie Street
Health and Welfare Canada
Vancouver, British Columbia V6B 4V5

Statistics Canada
Contact: Agriculture Statistics Division
Statistics Canada
Ottawa, Ontario K1A 0T6

National Film Board of Canada
Contact: 222 – 1 Street, S.E.
P.O. Box 2950, Station M
Calgary, Alberta T2P 3C3

Contact: Centennial Building
10031 – 103 Avenue
Edmonton, Alberta T5J 0G9

You can receive up to five free publications each year from Agriculture Canada. Student publications are available to schools when ordered in reasonable quantities **on school letterhead**. Orders will be filled as quickly as possible, while quantities last. Please allow four to six weeks for delivery.

Address orders to:
Communications Branch
Agriculture Canada
930 Carling Avenue
Ottawa, Ontario K1A 0C7

GENERAL

1123/E	Organization and Activities of Agriculture Canada
1296/E	Farming in Canada
1659/E	Starting a Farm in Canada
5054/E	Don't Bring It Back (folder)
5055/E	Short Films
5152/E	Canada's Agri-food System
5162/B	Technical Publications and Information from Agriculture Canada (folder)
5164/B	Agriculture Canada Priced publications (folder)
5171/B	Helping the Agri-food Industry Grow (folder)
5184/B	Ornamental Attractions at the Central Experimental Farm (factsheet)
5195/B	General Information on Tours – Central Experimental Farm (factsheet)
5198/B	The Agricultural Inspection Directorate

CAREERS

5099/B	Women in Agriculture
5176/B	Women, a Driving Force in the Agri-food System (folder)
5179/B	A Career in Agricultural and Food Research (folder)
5200/E	Careers in the Agri-food System

PESTICIDES

1202/E	Control of Fabric Pests
1370/E	Control of Rats and Mice
1735/E	Insect Control in the Home
1752/E	Insect Control in the Home Garden
5128/E	Let's Talk About Pesticides (folder)
9401/E	Wood Preservatives (factsheet)

FOOD

Home food preservation

892/E	Freezing Foods
1478/E	Home Storage Room for Fruits and Vegetables
1560/E	Canning Canadian Fruits and Vegetables
1742/E	Pickles and Relishes
1753/E	Jams, Jellies and Other Preserves
5187/E	Canning Meat at Home (factsheet)

Meat, poultry and alternates

1270/E	Turkey for Everyone (folder)
1317/E	Chicken Broilers (folder)
1428/E	Pork (folder)
1501/E	Canadian Lamb (folder)
1555/E	Beans, Peas and Lentils
1690/E	Meat Shopper's Guide
5167/B	Meat Inspection – Your Protection (folder)
5174/B	Economical Main Course Dishes (folder)

Milk and milk products

1622/E	Canadian Cheddar Cheese (folder)
1636/E	Canadian Cheese Guide (folder)
1648/E	Skim Milk Powder (folder)
1759/E	Making Dairy Products at Home

Fruits and vegetables

1476/E	Fresh Canadian Vegetables
1730/E	Apple Traditions the Modern Way (folder)
1735/E	All About Canadian Apples (folder)
1741/E	Potatoes Now (folder)
5172/B	Canadian Fruits and Vegetables Year Round (folder)
5173/B	Easy Gourmet Recipes with Frozen Foods (folder)

Miscellaneous

1392/E	Honey (folder)
1551/E	Cereals Anytime (folder)
1621/E	A Taste of Maple (folder)
1695/B	Food Storage in the Home (wall chart)
1707/E	Conserve Today to Consume Tomorrow
1720/E	Canada's Food Grades
1747/E	Food Shopping for One
1764/E	Feeding a Crowd Safely
5148/B	Shop Canadian Year Round (folder)
5150/B	Your Choice Counts (folder)
5175/B	Recipes with Canned Convenience (folder)

HORTICULTURE, PESTS AND DISEASES

1059/E	Home Vegetable Growing
1516/B	Gypsy Moth (folder)
1558/E	Growing Garden Tomatoes
1559/E	Growing Garden Potatoes (factsheet)
1570/E	Canadian Havens from Hay fever
1653/E	Container Gardening
1677/E	Growing Garden Grapes
1699/E	Poison-ivy, Western Poison Oak, Poison Sumac
1708/E	Care of Potted Flowering Plants
1718/B	Major Pests of Birch and Maple Trees (factsheet)
1722/E	Growing Trees in Canadian Gardens
1727/B	New Winter-hardy Roses and Other Flowering Shrubs
1732/E	Care of Foliage Plants
1755/E	Coral-bells for Canadian Gardens
1762/E	Herbaceous Perennials for the Prairie Provinces
1773/B	Pruning Fruit Trees in Your Home Garden (factsheet)

LIVESTOCK AND POULTRY

1381/E	Livestock on Small Farms
1439/E	Dairy Husbandry in Canada
1489/E	Managing a Small Poultry Flock
1524/E	Managing a Small Duck Flock
1557/E	The Registration of Animals in Canada

STUDENT PUBLICATIONS

What you should know about . . .

1350/E	Fruit Production
1412/E	Seeds
1486/E	Pollution and Agriculture (factsheet)
1667/E	Agriculture Canada (factsheet)

1709/E	Fertilizers
1774/E	Maple Syrup (factsheet)
1802/E	Pest Control (factsheet)
1803/E	Soil (factsheet)

Photos . . .

1616/B	Northern Agriculture
1748/B	Breeds of Poultry
1749/B	Breeds of Cattle, Horses and Swine
1750/B	Breeds of Sheep and Goats
1784/B	The Canadian Broiler Industry

TEACHER SUPPORT MATERIAL

HORTICULTURAL SERVICES 26

COURSE SEQUENCE

Horticultural Services 26 is the intermediate course in the Horticultural Services 16-26-36 sequence. This sequence is one of three occupational courses that comprise the agribusiness occupational cluster.

Horticultural Services 26 orients students to a major area of agribusiness. Students who indicate a strong desire or interest in pursuing jobs in this area should be encouraged to explore the related courses of agricultural production and agricultural mechanics.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should also be encouraged to enrol in the regular vocational horticulture program.

ENTRANCE REQUIREMENT

Students taking Horticultural Services 26 must have completed satisfactorily Horticultural Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Students already having a horticulture program may wish to integrate Horticultural Services 26 in the lab with the Horticulture 12-22 course(s). For the majority of the Horticultural Services 26 course, teachers are encouraged to establish, use and monitor community partners to provide students with on-the-job instruction under a teacher's supervision.

The course activities may occur in a combination of the following locations:
- a school horticultural lab
- the school grounds
- a school greenhouse
- a community partner's work site (e.g., parks, florists shops, nurseries, commercial greenhouses, garden centers, botanical gardens).

The following tools and equipment are suggested for teaching Horticultural Services 26. In situations where major items of equipment are not available at the school, community partnerships are recommended.

EQUIPMENT

aeration roller
booster sprayer
chain saw
cold room
compost bin
electric hedge trimmer
fertilizer spreader
garden tractor

greenhouse with environmental systems
hose reels
lawn mower
lawn sweeper
nylon string edge trimmer
plant propagation equipment
power lawn edger
power lawn vacuum
rototiller
seeding flats, trays and racks
shredder
stepladder
wheelbarrows.

TOOLS

common hand tools
cultivating hand tools
garden forks
garden hoses
lawn edger
lopping shears
measuring cups
pruning knives
pruning saw/hoes
pruning shears
rakes
shovels
spray wands.

OTHER LEARNING RESOURCES

Conover, H., *Grounds Maintenance Handbook* (3rd Edition). McGraw-Hill, 1977. (Approved basic learning resource for Horticulture 12-22-32.)

McDaniel, *Floral Design and Arrangement*. Prentice-Hall, 1981. (Approved support learning resource for Horticulture 12-22-32.)

McDaniel, *Ornamental Horticulture*. Prentice-Hall, 1982. (Approved support learning resource for Horticulture 12-22-32.)

Otto, J.H., Towle A., Bradley J.V., *Modern Biology*, Cdn. Edition. Holt, Rinehart, Winston, 1982. (Approved basic learning resource for Horticulture 12-22-32.)

Turgeon, *Turfgrass Management*. Prentice-Hall, 1980. (Approved support learning resource for Horticulture 12-22-32.)

York, B., *The Complete Family Flower and Garden Book*. Cretain Publications.

Other materials are available from:

Alberta Agriculture
Contact: Print Media Branch
Alberta Agriculture
9718 – 107 Street
Edmonton, Alberta T5K 2C8

OR
Contact your local Alberta Agriculture District Office.

Agriculture Canada (free publications)
Contact: Communications Branch
Agriculture Canada
930 Carling Avenue
Ottawa, Ontario K1A 0C7 (see attachment 1)

Supply and Services Canada
Contact: Supply and Services Canada
Publishing Center
Ottawa, Ontario K1A 0S9 (see attachment 2)

Alberta Agriculture Film Library
Contact: Film Library
Alberta Agriculture
7000 – 113 Street
Edmonton, Alberta T5H 5T6

The following filmstrips and teacher guides are available from:

Vocational Media Associates
McIntyre Media Ltd.
30 Kelfield Street
Rexdale, Ontario
M9W 5A2:

- Basics of Botany (Filmstrips No. 31092–127)
- Planting (Filmstrips No. 30750–127)
- Requirements for Health (Filmstrips No. 30753–127)
- Pruning (Filmstrips No. 30792–127)
- Propogating (Filmstrips No. 31089–127)
- Principles of Landscaping (Filmstrips No. 30797–127)
- Flower Arranging (Filmstrips No. 30752–127).

TEACHER SUPPORT MATERIAL

BUSINESS SERVICES 26

COURSE SEQUENCE

Business Services 26 is the intermediate course in the Business Services 16-26-36 sequence. This sequence is one of two occupational courses that comprise the business and office operations occupational cluster.

Business Services 26 orients students to wholesale and retail businesses. Students who indicate a strong desire or interest in pursuing jobs in these areas of industry should be encouraged to explore the related courses of office services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the business services sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should also be encouraged to enrol in the regular business education program.

ENTRANCE REQUIREMENT

Students taking Business Services 26 must have completed satisfactorily Business Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Where a lab is not available, or where integration of students into business education programs is not possible, the alternative of on-the-job training in the community may be considered. The teacher may wish to establish and use community partners to provide students with on-the-job training under a teacher's supervision for some of the Office Services 26 course.

The student who has not been trained to touch keyboard may have limited opportunities for office work.

RECOMMENDED FACILITIES, EQUIPMENT AND SUPPLIES FOR A BUSINESS SERVICES 26 LAB

- separate lab for typewriters and computers is recommended
- class set of electronic typewriters with dust covers
- class set of computers (CPU, monitor, keyboard) with dust covers
  (Note: The **recommended maximum** for IOP labs is 15 students.)
- one dot matrix printer for every four computers
- manual Q2, 3 or 4 switches to link computers to the printers
- class set of software appropriate to the grade being taught (check the Computer Courseware Guide produced by Alberta Education)
- an adequate number of electrical outlets for setting up these labs conveniently

- class set of posture chairs
- suitable typewriter and computer desks. Desks with hutches to hold printers are good space savers in a computer lab
- bookstands – one per student work station
- locking filing cabinets (two per lab; one should be for storing software)
- shelving to store books, supplies and small equipment such as electronic calculators
- blackboards (one per lab; preferably white boards for the reduction of dust) and bulletin boards
- paper supplies (e.g., newsprint, bond, printer paper)
- general supplies and equipment for processing mail (e.g., letter opener, sorting trays, date stamp and pad)
- postage scale
- telephone line – outside line preferred
- class set of desktop electronic calculators.

INSTRUCTIONAL SUGGESTIONS

You may find the following suggestions helpful:

Job Scope

Solicit the assistance of guidance counsellors to teach this unit. Use the current handbooks, pamphlets and brochures on careers available in your student services area.

Keyboarding

Review and encourage proper keyboarding techniques, such as correct keyboarding posture and machine operation. Guide and direct the student in order for him or her to master the technique of touch-typing.

The skills of proofreading and error correction should be developed in this course.

There are no timed writings or drills in the student workbook. However, we recommend incorporating timings and drills throughout the course. Most typewriting textbooks contain a variety of one and three minute timings and various drill exercises.

The production section is not all-inclusive. Please feel free to include additional exercises and other types of production work, such as handwritten and unarranged material.

Having students use the word processing equipment for their assignments in this keyboarding unit is ideal. Keyboarding and production can be taught on the computer using software packages and keyboarding packages. For a list of suitable software packages, see the Suggested Reference Material section.

Writing and Spelling

This unit should be incorporated into the keyboarding unit. Also, if your word processing equipment has the facility, demonstrate its ability to divide words, to spell check, etc.

Planning and Organizing

Throughout the term, students should be encouraged to do self-evaluations. The teacher should use the same instrument for regular evaluation of the students, discuss the results with the students and discuss methods to improve identified weaknesses.

Work Standards

Arrange to have a beauty consultant demonstrate the appropriate make-up application for an office worker, and, perhaps, colour-draping.

Work Area Arrangement

Encourage students to participate in the physical arrangement, regular cleaning, display design and methods of improving the overall working environment of their classroom.

Supply Management

Tour your school's supply room. If possible, arrange for the group under your supervision to sort and neatly arrange the supplies.

Obtain supply catalogues from retailers and wholesalers. Emphasize cost and unnecessary waste of office supplies. Discuss the costs to a company, of pilfered supplies and the consequences to an employee for such actions.

Have students bring in samples of various office supply requisition forms. These forms vary tremendously in format and may be difficult for you alone to obtain.

Telephone Techniques

Contact your local telephone company. Inquire about what pamphlets, tele-trainers, filmstrips, tours and information sessions they offer. Focus on the techniques, equipment and services. Role play the situations suggested in the workbook, but also incorporate actual experiences students or people they know have encountered.

Handling People

Provide samples of various appointment books and calendars.

Arrange to have a secretary talk to the class about procedures to use, and helpful pointers to follow when handling appointments.

Design a bulletin board showing examples of meeting notices and agendas.

Have a hotel representative speak to the class about his or her role in arranging meetings.

Filing Systems

Tour filing areas in your school, such as the main office, library and department rooms. Examine and discuss the means of filing and the different filing supplies and equipment.

The alphabetic filing unit is limited to names of individuals. Business names and government departments could be included to enrich this unit.

Copying

Visit the reprographics department of a local firm and have students report on the equipment in use. Also, consider visiting an office machine supply house or the display rooms of manufacturers or retailers of photocopiers to expose students to the variety of copiers.

Depending upon the equipment you have available, additional activities could be included in this unit.

Handling Mail

Contact Canada Post Corporation and inquire about their samples, pamphlets, class presentations and videos.

Arrange to have a local vendor demonstrate and explain mail-handling equipment. Obtain brochures from a variety of vendors regarding mail-handling equipment.

Arrange to have students visit the mail-handling facilities in a large company to observe the operations and equipment used.

In order for this unit to be presented efficiently, gather all equipment, supplies, samples and documents well in advance of instruction time.

Business Calculations

It is important for students to review the correct set-up of the work station, calculation techniques and their calculator operation before beginning this unit.

Microcomputer Keyboarding
Southwestern Publishing
%Gage Publishing
164 Commander Blvd.
Agincourt, Ontario M1S 3C7

Typing Tutor III
Microsoft Corporation
10700 Northup Way
Bellevue, Washington 98004

OTHER LEARNING RESOURCES

Farmer, Graham, Jenkins. *Personal Applications in Typewriting*. Gage Publishing Ltd., 1976.

Lloyd, Rowe, Winger. *Typing Power Drills*. Second edition. McGraw-Hill Book Co., Gregg Division, 1965.

Luke and Stiegler. *Office Systems and Procedures*. (Canadian Edition.) Markham, Ontario: Houghton Mifflin Canada Ltd., 1984.

PAMPHLETS, HANDBOOKS AND BROCHURES

A variety of publications on course-related topics are available from the following sources:

Alberta Government Telephones (Tellus Corporation)

- Contact a local office for current publications. Publications include:
  You are the Voice of Your Business

Canada Post Corporation

- Contact a local post office for current publications. Publications include:
  Packaging Tips from Canada Post
  Moving Along with the Mail
  Beyond the Basics
  How to Use the Mail
  How to Purchase Envelopes
  When You're Trying to Keep your Overhead from Becoming a Monster Every Bit Helps . . .
  Special Delivery
  Parcel Rates within Canada
  Postal Rates within Canada
  Postal Rates to the U.S.A.
  Customer's Guide to Postal Standards and Codes
  Priority Post EMS Courier (Package)

SOFTWARE

Appleworks
Apple Computer Inc.
20525 Mariani Avenue
Cupertino, California
95014

Bank Street Writer
Scholastic Inc.
123 Newkirk Road
Richmond Hill, Ontario
L4C 3G5

TEACHER SUPPORT MATERIAL

OFFICE SERVICES 26

COURSE SEQUENCE

Office Services 26 is the intermediate course in the Office Services 16-26-36 sequence. This sequence is one of two occupational courses that comprise the business and office operations occupational cluster.

Office Services 26 orients students to a major area of business; namely, office operations. Students who indicate a strong desire or interest in pursuing jobs in this area should be encouraged to explore the related courses of office services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the office services sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should also be encouraged to enrol in the regular business education program.

ENTRANCE REQUIREMENT

Students taking Office Services 26 must have completed satisfactorily Office Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools that already have a business education program may wish to integrate teaching Office Services 26 with Typing 10-20. Where this is being considered, it should be noted that Office Services 26 is geared toward preparing students for the world of work, while Typing 10-20 classes serve the needs of students who are academic as well as those who wish to specialize in business training.

Where a lab is not available or where integration of students into business education programs is not possible, the alternative of on-the-job training in the community may be considered. The teacher may wish to establish and use community partners to provide training under a teacher's supervision for some of the Office Services 26 course. We strongly recommend that students be taught the keyboarding component of this course prior to their entry into a community partnership.

The student who has not been trained to touch keyboard may have limited office work available.

The following facilities, equipment and supplies are suggested when teaching Office Services 26 in a school:

- separate lab for typewriters and computers
- adequate number of electrical outlets for setting up these labs conveniently
- telephone line – outside line preferred
- locking filing cabinets (two per lab; one should be for storing software)
- shelving to store books, supplies and small equipment such as electronic calculators

- blackboards (one per lab; preferably white boards for the reduction of dust) and bulletin boards
- suitable typewriter and computer desks. Desks with hutches to hold printers are good space savers in a computer lab
- class set of electronic typewriters with dust covers
- class set of computers (CPU, monitor, keyboard) with dust covers
  (Note: The recommended maximum for IOP labs is 15 students.)
- one dot matrix printer for every four computers
- manual Q2, 3 or 4 switches to link computers to the printers
- class set of software appropriate to the grade being taught (check the Computer Courseware Guide produced by Alberta Education)
- paper supplies (e.g., newsprint, bond, printer paper)
- book stands for each lab – one per student work station
- class set of desk-top electronic calculators.

SUGGESTED ACTIVITIES

The following are suggestions which you may find helpful when teaching Office Services 26 and when reviewing and reinforcing concepts, skills and attitudes developed in Office Services 16:

OFFICE EQUIPMENT AND SUPPLIES

- A tour of the school office and/or various community businesses will add realism to this unit.

KEYBOARDING

- In order to ensure a smooth, continuous typing style, students should be encouraged to keep their eyes on the copy and ignore errors. Errors can be circled when assignments are complete.
- You may want to remind students that it is common to make errors when you are learning a new skill and that it is OK to make mistakes. The more they practise, the fewer errors they will make.
- Margin setting should be introduced at the start of the keyboarding section.
- The 60-space line has been used for the office business letter in the keyboarding application section because this is a common practice in the industry.
- Time writing may be incorporated while the student is learning the keyboard and throughout the course. Most typewriting textbooks contain a variety of one- and three-minute timings.
- Tabulation (setting tabs and use of the tab key) can be introduced when the student begins to type paragraphs.

KEYBOARDING APPLICATIONS

- The correct names for the parts of a business letter should be required and reinforced when teaching the keyboarding application section.
- The keyboarding application section is not all-inclusive. Please feel free to include additional exercises and other types of production work (e.g., envelopes, one- and two-page reports, multi-column tables).
- Keyboarding and production can be taught on the computer, using software packages and keyboarding packages. It is essential that students be encouraged to type continuously and to avoid editing their copy while inputting. Errors should be corrected after a piece of work is completely entered. For a list of suitable software packages, please see the Suggested Reference Material section.

OFFICE TELEPHONE OPERATION

- If you have a classroom telephone, you may want to have your students respond to it, to give them practice in answering a business telephone. (Give each student one week for this activity.)

RECEPTION DUTIES

- Encourage students to observe the job activities of the school receptionist (before school, at noon hour, etc.) and report on his or her duties.
- Job shadow the receptionist in a variety of local office operations.

FILING

- The filing unit is limited. A variety of other methods of filing could be included to enrich this unit.

DUPLICATION

- This section reviews and reinforces basic photocopying information for students. Depending upon the equipment available, additional activities could be included.

BUSINESS CALCULATIONS

- Additional drills and application exercises may be developed and used.

HANDLING MAIL

- Invite a community partner (e.g., school secretary, mailroom worker) to demonstrate the handling and sorting of mail.
- Community partnerships including field experiences will facilitate on-the-job learning of the various mail handling procedures and systems used in the workplace.

CONSUMERISM

- Newspapers, catalogues and flyers may be used to simulate, review and reinforce consumerism activities.

WORK STANDARDS

- The expectations outlined are common throughout the business world.
- Students should be encouraged to do self-evaluations throughout the course and compare their evaluations with those done by the teacher and community partners.

OTHER LEARNING RESOURCES

Farmer, Graham, Jenkins. *Personal Applications in Typewriting*. Gage Publishing Ltd., 1976.

Lloyd, Rowe, Winger. *Typing Power Drills*. (Second edition.) McGraw-Hill Book Co., Gregg Division, 1965.

Merchant, Ronald. *Basic Business Math and Electronic Calculations*. (Third edition.) Star Publishing Co., 1983.

Rowe, Lloyd, Winger. *Typing 300 Volume One*. (Second edition.) McGraw-Hill Ryerson Ltd., 1977.

SOFTWARE

Appleworks
Apple Computer Inc.
20525 Mariani Avenue
Cupertino, California 95014

Bank Street Writer
Scholastic Inc.
123 Newkirk Road
Richmond Hill, Ontario L4C 3G5

Microcomputer Keyboarding
Southwestern Publishing
℅ Gage Publishing
164 Commander Blvd.
Agincourt, Ontario M1S 3C7

Typing Tutor III
Microsoft Corporation
10700 Northup Way
Bellevue, Washington 98004

See the latest Learning Resources Distributing Centre (LRDC) Catalogue for further information regarding software relating to keyboarding, word processing and their related uses.

TEACHER SUPPORT MATERIAL

BUILDING SERVICES 26

COURSE SEQUENCE

Building Services 26 is the intermediate course in the Building Services 16-26-36 sequence. This sequence is one of two occupational courses that comprise the construction and fabrication occupational cluster.

Building Services 26 orients students to a major area of the residential and commercial construction and maintenance industry. Students who indicate a strong desire or interest in pursuing jobs in this area should be encouraged to explore the related courses of construction services and maintenance and hospitality services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the building services sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should also be encouraged to enrol in the regular building construction program.

ENTRANCE REQUIREMENT

Students taking Building Services 26 must have completed satisfactorily Building Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools which already have a building construction program may wish to integrate teaching Building Services 26 in the lab with Building Construction 12-22 course(s).

Teachers are encouraged to establish, use and monitor community partners to provide students with on-the-job training, under a teacher's supervision, during the course.

The following tools and equipment are recommended for teaching Building Services 26. If major items of equipment are not available, the use of community partners is suggested.

EQUIPMENT

- Caulking gun
- Electric drill
- Hot tape carpet iron
- Jigsaw
- Ladders
- Level
- Power miter saws
- Power plane
- Radial arm saws
- Sawhorses
- Scaffolding
- Sets of basic drafting equipment
- Table saws
- Tile cutter or diamond saw

TOOLS

- Carpet kicker
- Carpet knife
- Chisels
- Counter sink set
- Framing squares
- Hammers
- Handsaws (wood, ceramic)
- Hole saws
- Plumb bob
- Razor knives
- Tape measures
- Twist drill bits
- Wood drill bits

OTHER LEARNING RESOURCES

Atkinson, H.F. *Rough Carpentry and Masonry*. McGraw-Hill Ryerson, 19_.

Canon and Hatby. *Building Construction Technology*. McGraw-Hill, 1982. (Recommended learning resource for Building Construction 12-22-32.)

Capotosto, J. *Basic Carpentry*. Reston Publishing, 19_.

Miller. *Building Construction – Materials and Methods*. Gage Publishing, 1980. (Basic learning resource for Building Construction 12-22-32.)

Sutton, W. *Building Construction*. John Wiley and Sons.

_____. *Alberta Building Code*. Government of Alberta.

_____. *Canadian Wood Frame House Construction*. (Metric Edition.) Canadian Mortgage and Housing Corporation, 1980. (Recommended learning resource for Building Construction 12-22-32.)

TEACHER SUPPORT MATERIAL

CONSTRUCTION SERVICES 26

COURSE SEQUENCE

Construction Services 26 is the intermediate course in the Construction Services 16-26-36 sequence. This sequence is one of two occupational courses that comprise the construction and fabrication occupational cluster.

Construction Services 26 orients students to the major area of residential and commercial construction and maintenance sub-trades. Students who indicate a strong desire or interest in pursuing jobs in this industry should be encouraged to explore the related courses of building services and maintenance and hospitality services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the construction services sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should also be encouraged to enrol in the regular building construction program.

ENTRANCE REQUIREMENT

Students taking Construction Services 26 must have completed satisfactorily Construction Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools that already have a building construction program may wish to integrate teaching Construction Services 26 in the lab with Building Construction 12-22 course(s).

Teachers are encouraged to establish, use and monitor community partners to provide students with on-the-job training, under a teacher's supervision, during the course.

The following tools and equipment are recommended for teaching Construction Services 26. If major items of equipment are not available, the use of community partners is suggested.

EQUIPMENT

Arc welding unit
Basic drafting equipment
Benches
Brooms
Compressed air
Cut-off saw
Dunk tank
Dustpans
Garbage cans
Jig saw
Oxyacetylene welding unit
Pedestal grinder
Pipe threading set
Pipe vise

TOOLS

Chipping hammer
Conduit-bending tool
Files
Framing square
Hammers
Hole-saw set
Levels
Pipe cutter
Pliers
Plumb bobs
Saws (wood, metal)
Screwdrivers
Shovels
Tape measures

EQUIPMENT

Portable circular saw
Power hacksaw/bandsaw
Razor knives
Soldering iron/gun
Welding table

TOOLS

Test lights (110v)
Welding gloves
Welding helmet
Wire brushes
Wood bits

OTHER LEARNING RESOURCES

A Homeowner's Guide: Permits and Wiring (87–1025) Edmonton Power.

Althouse. *Modern Welding*. General Publishing, 1984. (Basic learning resource for Welding 12-22-32.)

Betts, R.M. (editor). *Teacher's Guide for Exploring the Construction Industry*. McKnight Publishing Co., 1976.

Blankenbaker. *Modern Plumbing*. Goodheart-Wilcox, 1981. (Basic learning resource for Piping 12-22-32.)

Canadian Electric Code (15th Edition). Canadian Standards Association, 1986. (Basic learning resource for Electricity 12-22-32.)

Chasis, D. A. *Plastic Piping Systems* (2nd Edition). Industrial Press Inc., 1988.

Farm Welding (Agdex 785). Alberta Agriculture.

Gasfitting Information for Residential Property Owners. Alberta Labour, Gas Protection Branch.

Home and Farmstead Wiring Information. Alberta Labour, Electrical Protection Branch.

How to Read House Construction Drawings (Homedex 1700-41). Alberta Agriculture, 1985.

Illustrations for 1980 Alberta Plumbing and Drainage Act Regulations. Government of Alberta, 1980.

Kennedy, H.W. *Welding Technology*. Sams Publications, 1982. (Recommended learning resource for Welding 12-22-32.)

Low Energy Home Designs (Homedex 1799–71–3). Alberta Agriculture.

Meikle. *Plumbing from the Ground Up*. Holt, Rinehart and Winston of Canada Ltd., 1981. (Basic learning resource for Piping 12-22-32.)

Pender. *Welding* (Metric 3rd Edition). McGraw-Hill Ryerson Limited, 1986. (Basic learning resource for Welding 12-22-32.)

Plumbing and Drainage O. C. 1284/77, Alberta Labour, Plumbing Services Branch.

Plumbing Information for Residential Property Owners. Alberta Labour, Plumbing Services Branch.

School Plant Maintenance Manual. School Plant Officials Society of Alberta, 1988.

TRAC Common Core: Oxyacetylene Cut and Weld. Province of British Columbia, Ministry of Advanced Education, 1978.

Tuttle. *Fundamentals of Oxyacetylene and Arc Welding*. Pitman Publishing, 1968. (Recommended learning resource for Welding 12-22-32.)

Weiss W. *Home Maintenance* (2nd Edition). Glenco Publishing, 1983.

TEACHER SUPPORT MATERIAL

CRAFTS AND ARTS 26

COURSE SEQUENCE

Crafts and Arts 26 is the intermediate course in the Crafts and Arts 16-26-36 sequence. This sequence is one of two occupational courses that comprise the creative arts occupational cluster.

Crafts and Arts 26 orients students to a variety of areas in the creative arts industry. Students who indicate a strong desire or interest in pursuing jobs in this industry should be encouraged to explore the related courses of technical arts, esthetology, fashion and fabric services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the crafts and arts sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should also be encouraged to enrol in the regular vocational program.

ENTRANCE REQUIREMENT

Students taking Crafts and Arts 26 must have completed satisfactorily Crafts and Arts 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

An ideal facility for Crafts and Arts 26 instruction would provide the physical resources to accommodate all of the skills identified in the Crafts and Arts 26 Profile. Laboratory/studio activities comprise the major components of the course, and these may be taught in an art room that provides:

- safe and adequate studio facilities
- ample display space
- areas for viewing and discussing craftwork and artwork in large or small groups.

Schools already possessing an art program may wish to integrate teaching Crafts and Arts 26 in the art room with the Art 10-20 course. Where an art room is not available and/or where the integration of students is not possible, two alternatives are suggested:

1. use, with modifications, an existing lab/classroom, or
2. establish and use community partners to provide students with on-the-job instruction, under a teacher's supervision, for the majority of the Crafts and Arts 26 course.

Recommended requirements for adopting the first alternative include the availability of facilities, tools and supplies usually associated with an art room. These include:

Facility

- Area – work space should be planned to accommodate a maximum of fifteen students. Overcrowding interferes with both student safety and effective teaching of the art curriculum. Storage space, in addition to work space, should be determined on a per-student basis.

- Location
  - on the ground floor with access to deliveries.
  - a northern exposure is desirable, and the room should be isolated from regular classrooms (work noise is often a factor).
  - direct access to the outdoors is desirable.
- Floors – washable surface.
- Doors – should have double doors to facilitate movement of equipment; also, two exits.
- Lighting – should have some windows and fluorescent full-spectrum lighting. Blackout facilities are essential for viewing slides, films and video.
- Ventilation – windows that open; a fume exhaust hood.
- Electrical – wiring should be 110 and 220 with several electrical outlets on different circuits.
- Electronic – all appropriate jacks and outlets for electronic media (TV, video, computer, etc.).
- Teaching and research space – library space with a work table, gallery/display areas, effective audio-visual viewing space, an area for large and small group presentations.
- Storage space – a lockable walk-in supply room with adjustable or modular storage units; also, storage shelves and cupboards beneath counters in the classroom. All storage spaces should be lockable in view of community use of workrooms. Adequate storage space should also be provided for reference materials, works of art, models, slides and reproductions.

Display Space and Furniture

Display areas should accommodate both two- and three-dimensional works of various sizes.

- Tackboard – should be in all available space.
- Display shelves – adjustable shelves mounted on brackets.
- Dropped ceiling hangers – for hanging 3-D works.
- Outside the art room – display areas (tackboards, locking cabinets) should be located in other parts of the school, especially in hallways and common areas.

Classroom Equipment and Furniture

Sufficient equipment should be provided to allow independent work on large- and small-scale projects in a variety of media. The following are basic furnishings for a high school art room:

- Sinks – two peninsulas or island units with clay traps.
- White board – minimum 1200 mm x 1200 mm.
- Bookshelves – open shelves for reference books and textbooks.

- Counter and cupboard storage – sufficient space for art paper, drawing boards and supplies, projects in progress, audio-visual materials, models, art works and reproductions.
- Steel cabinets for storing hazardous materials
- Teacher's desk and a demonstration table
- Filing cabinet
- Art tables – individual student tables with tilted tops or large work tables with chairs or adjustable stools. Table-top easels for use on large work tables.
- Easels – 15 large easels for painting and presentations.
- Large paper cutter
- Tool cabinet, with hand tools
- Large wall screen
- Slide projector, laserdisc player, TV monitor, computer
- Ceramic kiln – with automatic shut-off; kiln furniture. (A kiln closet with exhaust system is recommended.)
- Garbage cans – metal for waste, plastic (with lids) for storage.
- Clean-up equipment – broom, mop and pail, sponges, scrub brushes, dustpan.
- Metal drying rack
- First aid kit/eye-wash station
- Paper-towel dispensers
- Workbench with vise
- Fire extinguisher/fire blanket

Art Materials and Tools

Ceramics

Clay – prepared
Canvas or cotton duck for tables
Modelling tools – manufactured, found objects
Glazes
Oxides
Kiln wash
Pyrometric cones
Sponges
Bamboo brushes
Plastic bags
Small plastic squeeze bottles
Plastic pails with lids for glaze storage
Kiln furniture
Rolling pin
Sieve
Heat resistant gloves
Wire clay cutters
Dipping tongs

Printmaking

Linoleum
Soft wood blocks
Carving tools
Whetstone
Printing inks (water-based)
Silkscreen fabric, frames
Solvents (note hazards)
Inking boards
Brayers
Squeegees
Drying racks or lines
Roller press (positive feed)

Sculpture and Construction

Plaster of Paris
Ceramics materials
Wire
Sandpaper
Wallpaper paste
Newspapers
Modelling clay
Straws
Sticks, toothpicks
Adhesive, tapes, glue
Found materials
Soldering and welding tools and materials
Plastic pails
C-clamps
Files
Chisels, gauges mallets, hammers
Sponges
Modelling tools (manufactured and found)
Cardboard boxes, sheets, tubes
String
Knives, utility knives

Drawing

Drawing boards
Charcoal sticks
Conte sticks
Pencils – hard and soft
Pencil crayons
India ink, coloured inks
Straight pens
Felt tip pens – fine and thick
Wax crayons
Collection of found objects
Quills or reeds
Oil and chalk pastels
Magnifying glasses
Newsprint
Kraft paper
Parchment
Manilla paper
Transparent paper
Drawing paper
Coloured papers
Fingerpaint paper (for felt tip pens)
Drawing erasers

Fibres

Cotton (100 percent – bleached or unbleached)
Burlap
Sewing needles and pins
Weaving needles or bodkins
Thread
Yarns, carded wool
Fabric dyes and fixatives
Batik wax
Cotton string
Fabric shears
Embroidery hoops or wooden frames
Plastic funnel
Simple frame looms
Iron
Large plastic bottles
Large plastic pails
Measuring spoons and cups
Rubber gloves
Brushes, wax applicators/tjantings
Electric fry pans
Sewing machine

Found Materials

- Newspapers
- Magazines
- Paper bags, milk cartons
- Cardboard boxes, tubes
- Wood scraps, masonite
- Large and small jars
- Household artifacts
- Styrofoam scraps
- Plastic bags, bottles, pails
- Roll ends from newspaper
- Rags
- Aluminum plates, foil plates
- Egg cartons
- Bones
- Fabric scraps
- Yarn scraps, string, rope and cord
- Toothbrushes
- Old kitchen utensils, spools
- Clothing – costumes
- Foam rubber scraps
- Acoustic tile scraps
- Stones
- Shells
- Seed pods
- Dried flowers
- Driftwood
- Bark
- Gourds

Painting

- Brushes
  - small round
  - medium round
  - large flat
  - bamboo
  - medium flat
  - assorted wide
- Mixing tray, palettes
- Paint
  - tempera (block, powder, liquid)
  - acrylic
  - watercolour
  - oil
- Primer
- Sponges
- Glass/plastic containers
- Easels
- Paper
  - manilla
  - cover
  - kraft
  - watercolour
  - Mayfair
- Painting boards (for stretching watercolour paper)
- Painting surfaces
  - canvas and wood for stretchers
  - masonite
  - found objects

Read: "Hazardous Art Materials and Occupational Safety". Art: Senior High Teacher Resource. Alberta Education, 1986. (pp. 90-114.)

Evaluation in Craft and Arts 26

Because of the diversity of concepts, skills and attitudes that students may develop in Crafts and Arts 26, teachers are encouraged to use a diversity of evaluation strategies to assess students' progress and to reinforce positive and correct behaviours. In addition to the evaluation instruments included in the Crafts and Arts 26 Student Workbook and the generic skills evaluative instrument included as part of this Teacher Resource Manual, the following evaluation strategies may be used.

Portfolios: These are examples of student work selected over the length of the term or period of evaluation. The teacher can examine work for progress in the application of craft art concepts, the refinement of expressive skills and the expansion of subject matter. A sample portfolio evaluation chart is attached (p. 341).

Anecdotal Records: Teachers may keep charts, checklists and brief notes about students' work habits, attitudes, understanding, contribution to discussions and application of information. Such observational notes are valuable evaluation tools.

Written Assignments: A range of written assignments are included in the student workbook. Discussion and research skills are developed as a component of many of these written assignments.

Oral Participation: Student activities identified in the student workbook include both discussion and brainstorming activities. Each student should be encouraged to participate as a member of small group discussions and other activities as well as whole-class oral activities.

Tests: Written tests, quizzes and recognition tests are appropriate for many of the concepts, skills and attitudes in the course. They provide useful summative evaluation information, particularly where processes of craft-making, art-making and vocabulary are involved.

OTHER LEARNING RESOURCES

An extensive list of print, visual and audio-visual resources is in the following documents:

- Art: Senior High Teacher Resource. Alberta Education, 1986. (pp. 54-89.)
- Art 10-20-30 Curriculum Guide. Alberta Education, 1986. (p. 5.)

These reference materials may be used to complement projects, patterns, plans, etc., obtained from community partners involved in the design, construction and sale of craftwork and artwork.

CRAFTS AND ARTS 26

PORTFOLIO EVALUATION

Name: ____________________ Class: ____________________ Date: ________________

Requirements of Assignment

__________ Required examples of work included? ________________________________.

__________ Work is signed, dated, presented according to requirements.
Comment: ____
____

__________ Subject matter rendered in a variety of media, techniques.
Comment: ____
____

Growth

__________ Work shows growth in skill and confidence over the period of assignment.
Comment: ____
____

__________ Finds own ideas for creating and expressing subject matter.
Comment: ____
____

__________ Uses media effectively.
Comment: ____
____

__________ Refines, modifies ideas to suit medium, problem.
Comment: ____
____

Summary Assessment

Student: ________________________ Teacher: ________________________

TEACHER SUPPORT MATERIAL

TECHNICAL ARTS 26

COURSE SEQUENCE

Technical Arts 26 is the intermediate course in the Technical Arts 16-26-36 sequence. This sequence is one of two occupational courses that comprise the creative arts occupational cluster.

Technical Arts 26 orients students to a major area of the creative and graphic arts industries. Students who indicate a strong desire or interest in pursuing jobs in these industries should be encouraged to explore the related course of crafts and arts.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the technical arts sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should also be encouraged to enrol in the regular vocational visual communications or graphic arts programs.

ENTRANCE REQUIREMENT

Students taking Technical Arts 26 must have completed satisfactorily Technical Arts 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools that already have a visual communication or graphic arts program may wish to integrate the teaching of Technical Arts 26 in the lab along with the Vocational 12-22 course(s).

Teachers are encouraged to establish, use and monitor community partners who provide students with on-the-job training or experience during the course.

The following tools and equipment are recommended for teaching Technical Arts 26. If major items of equipment are not available, the use of community partners is suggested.

Graphic Arts

- A suitable area with appropriate equipment for designing, laying out and producing graphic communication samples. Equipment should include:
  - typesetting machine
  - layout and design tools and equipment
  - duplicating, printing or computer equipment.

Photographic Arts

- A suitable area to take photographs, develop the film, make prints with darkroom enhancement techniques and mount prints on card stock. Equipment should include:
  - process camera
  - a variety of cameras
  - studio lighting for portraiture
  - photographic studio equipment
  - film processing equipment
  - darkroom equipment

  - suitable storage areas for paper, film and chemicals
  - mounting equipment.

Media Arts

- A suitable area with appropriate equipment to create video, television or stage productions. The equipment should include:
  - a variety of lighting equipment
  - audio-visual equipment
  - set construction tools and equipment.

OTHER LEARNING RESOURCES

Biegeleisen, J.I. *Design and Print Your Own Posters*. Watson-guptil, 1980.

Broekhuizen, Richard J. *Graphic Communications* (McKnight). Collier MacMillan, 1979.

Cogoli. *Photo-Offset Fundamentals*. (5th Edition.) Collier MacMillan, 1986. (Approved basic learning resource for Visual Communications 12-22-32.)

Hendry, William J. *Introduction to 12 Graphic Arts*. McGraw-Hill Ryerson, 1987.

Hird, Kenneth F. *Understanding Graphic Arts*. Gage, 1982. (Approved support learning resource for Graphic Arts 12-22-32.)

Kagy, Frederick D. *Graphic Arts*. Goodheart-Willcox. 1981.

Langford, Michael. *The Single Lens Reflex Handbook*. Knof, 1983.

Walker, Richard and Robert E. Walker. *Exploring Photography*. Goodheart-Willcox, 1983.

TEACHER SUPPORT MATERIAL

NATURAL RESOURCE SERVICES 26

COURSE SEQUENCE

Natural Resource Services 26 is the intermediate course in the Natural Resource Services 16-26-36 sequence. This sequence has been developed in Grade 11 as three occupational areas: mining, forestry, oil and gas.

Natural Resource Services 26 orients students to the major natural resource industries. Students who indicate a strong desire or interest in pursuing jobs in these industries should be encouraged to explore the related courses of agricultural mechanics, horticultural services, warehouse services and building services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the natural resource services sequence and consider complementing it with one or more related course sequences.

ENTRANCE REQUIREMENT

Students taking Natural Resource Services 26 must have completed satisfactorily Natural Resource Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Few schools possess the facilities and equipment to provide "on-campus" instruction in Natural Resource Services 26. In jurisdictions where a similar course has been offered, the most effective learning experiences were facilitated through the development of school-community partnerships with one or more local operations.

Teachers are encouraged to establish, use, and monitor community partners who provide students with on-the-job training or experiences during the course.

OTHER LEARNING RESOURCES

Forestry

Farming Canada's Forest. Forest Management and Silviculture. Canadian Pulp and Paper Association, Quebec.

Forestry. Alberta Correspondence School, Alberta Education, 1975.

Lash, G.H. *A Walk in the Forest*. Canadian Pulp and Paper Association, Quebec.

Managing the Forest. Western Educational Development Group. Faculty of Education, University of British Columbia, 1985.

Other teacher resources related to forestry and the pulp and paper industry may be obtained from:

Alberta Forest Service Information Centre
9920 - 108 Street
Edmonton, Alberta
T5K 2M4
(427-3590)

or 703 - 6 Ave S.W.
Main Floor
Calgary, Alberta
T2P 0T9
(297-6324)

Northern Forest Research Centre
Canada Forestry Service
Environment Canada
5320 - 122 Street
Edmonton, Alberta
T6H 3S5

The Alberta Forestry Association
311 Alberta Block
10526 - Jasper Avenue
Edmonton, Alberta
T5J 1Z7

The Canadian Pulp and Paper Association
23rd Floor, Sun Life Building
1155 Metcalfe Street
Montreal, Quebec
H3B 2X9

Oil and Gas

A Guide to Business Opportunities in the Oil and Gas Industry in Northern Alberta. Northern Alberta Development Council.

Drilling Rig Task Details and Performance Standards for the Floorhand. Canadian Association of Oil Well Drilling Contractors, 1981.

Gerding, M. (ed.) *Fundamentals of Petroleum.* (3rd Edition.) Petroleum Extension Service, The University of Texas at Austin, 1986.

This teacher resource and others are available from:

Petroleum Industry Training Services
Bay 13, 2115 - 27 Avenue, N.E.
Calgary, Alberta

Introduction to Oil and Gas Production. American Petroleum Institute, Dallas, Texas.

McRory, R.E. *Energy Alberta. Oil Sands and Heavy Oils of Alberta.* Alberta Energy and Natural Resources, 1982.

Oil Sands and Heavy Oils of Alberta. Alberta Energy and Natural Resources.

Our Petroleum Challenge – The New Era. The Petroleum Resources Communication Foundation, Calgary, Alberta.

Training Planning Guide. Petroleum Industry Training Service, 1988-89.

Mining

Alberta Coal: Energy for the World. Office of Local Research and Technology, Alberta Energy.

Mining. What Mining Means to Canada. The Mining Association of Canada, 1977.

Other materials are available from:

The Coal Association of Alberta
Suite 301, 1000 Eight Avenue, S.W.
Calgary, Alberta
T2P 3M7

Alberta Community and Occupational Health
10030 - 107 Street
Edmonton, Alberta
T5J 3E4

TEACHER SUPPORT MATERIAL

CHILD AND HEALTH CARE SERVICES 26

COURSE SEQUENCE

Child and Health Care Services 26 is the intermediate course in the Child and Health Care Services 16-26-36 sequence. This sequence has been developed as four occupational courses that comprise the personal and public services occupational cluster.

Child and Health Care Services 26 orients students to major areas of the child and health care industries. Students who indicate a strong desire or interest in pursuing jobs in these industries should be encouraged not only to explore related courses, but to consider actively pursuing a career in child and health care.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the child and health care services sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should be encouraged to enrol in the regular vocational health care program.

ENTRANCE REQUIREMENT

Students taking Child and Health Care Services 26 must have completed satisfactorily Child and Health Care Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools already possessing a health care program may wish to integrate teaching Child and Health Care Services 26 in the same lab area. Where a lab is not available and/or where the integration of students is not possible, three alternatives are suggested for the instruction of skills:

1. Use, with minor modification, an existing lab/classroom.
2. Use the home economics lab area.
3. Establish and use community partners to provide students with on-the-job instruction under a teacher's supervision.

Major requirements for adopting the first alternative include the availability of:

- homelike set-up
- sanitary and secure storage areas
- suitable sink and hot/cold water facilities.

Basic child care supply items include:

- baby bottles and nipples
- cloth diapers and pins
- crib
- disposable diapers
- dolls
- high chair
- infant seat.

Adult health care supply items include:

- daybed or sofa

First aid supply items include:

- basic first aid kit
- selection of bandages.

Nutrition supply items include:

- cooking utensils
- dishes
- refrigerator
- stove
- table and chairs.

Homemaking supply items include:

- cleaning equipment
- cleaning supplies
- dryer
- washer.

OTHER LEARNING RESOURCES

Averbach, Stevanne. *The Whole Child*. G.P. Putnam's Sons, New York, 1981.

Canada's Food Guide Handbook. Health and Welfare Canada, 1982.

Child's Body: A Parents' Manual. Paddington Press Ltd., New York and London, 1977.

Howe, Phyllis. *Basic Nutrition in Health and Disease*. W.B. Saunders Company, 1981.

Huber, H., Spatz, A.; C. Coviello. *Homemaker/Home Health Aide*. Delmar Publishers Inc., New York, 1985.

Illerbrun, Marley. *Long-Term Care Aide and Homemaker*. Minister of Education, Province of British Columbia, 1984.

Kaluger, George; Meriem Kaluger. *Human Development the Span of Life*. C.V. Mosby Company, 1979.

St. John Ambulance. *The Complete Handbook of Family Health Care*. St. John Priory of Canada Properties, 1984.

St. John Ambulance. *First Aid Safety Oriented*, 1987.

Zucker, Elana. *Being a Homemaker and Home Health Aide*. Robert J. Brady Co., 1982.

TEACHER SUPPORT MATERIAL

ESTHETOLOGY 26

COURSE SEQUENCE

Esthetology 26 is the intermediate course in the Esthetology 16-26-36 sequence. This sequence has been developed as four occupational courses that comprise the personal and public services occupational cluster.

Esthetology 26 orients students to major areas of the personal service industry. Students who indicate a strong desire or interest in pursuing jobs in these industries should be encouraged to explore the related courses of hair care and business services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the esthetology sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should be encouraged to enrol in the regular vocational beauty culture program.

ENTRANCE REQUIREMENT

Students taking Esthetology 26 must have completed satisfactorily Esthetology 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools already possessing a beauty culture program may wish to integrate teaching Esthetology 26 in the beauty culture lab with Beauty Culture 12-22 course(s). Where a lab is not available and/or where the integration of students is not possible, two alternatives are suggested:

- Use, with minor modifications, an existing lab/classroom
- Establish and use community partners to provide students with on-the-job instruction under a teacher's supervision for the majority of the Esthetology 26 course.

Major requirements for adopting the first alternative include the availability of:

- basic tools, implements and supply items suitable for facial/nail use.
- facial cosmetics.
- facial equipment, chairs, tables, operator's stool
- suitable sanitary aids common to a beauty shop or lab (e.g., washer, dryer, sanitary and secure storage areas)
- suitable sinks and hot/cold water facilities
- two adjacent electrical outlets for each student in the course
- wall- or table-mounted magnifying mirror

The estimated equipment, tools and supply needs for each student in Esthetology 26 are:

- assorted supplies for plain facial, plain manicure, plain pedicure
- capes, towels
- cotton – other manicure equipment
- cuticle scissors
- facial chairs or reclining hydraulic chairs
- materials for false eyelash application
- orangewood sticks
- sanitary paper towels
- tweezers

OTHER LEARNING RESOURCES

Colletti, Anthony B. *A Complete Question and Answer Guide to Hairdressing and Cosmetology*. Keystone Publications, 1978.

Dalton, John W. *The Professional Cosmetologist*. (3rd edition.) West Publishing Co., 1983.

Dicard Villa, Louis. *Cosmotology. The Art of Making Up*. Gage Educational Publishing Co., 1987.

Gerson, Joel. *Standard Textbook for Professional Estheticians*. Milady Publishing Corp., 1983.

TEACHER SUPPORT MATERIAL

FASHION AND FABRIC SERVICES 26

COURSE SEQUENCE

Fashion and Fabric Services 26 is the intermediate course in the Fashion and Fabric Services 16-26-36 sequence. This sequence has been developed as four occupational courses that comprise the personal and public services occupational cluster.

Fashion and Fabric Services 26 orients students to major areas of the personal and public services industry. Students who indicate a strong desire or interest in pursuing jobs in these industries should be encouraged to explore the related courses of esthetology, hair care and business services.

Students demonstrating appropriate interests, attitudes, levels of participation, and basic competencies should be encouraged to complete the fashion and fabric services sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should be encouraged to enrol in the regular clothing and textile program.

ENTRANCE REQUIREMENT

Students taking Fashion and Fabric Services 26 must have completed satisfactorily Fashion and Fabric Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools already possessing a clothing and textiles program may wish to integrate teaching Fashion and Fabric Services 26 in the lab with the Clothing and Textiles 10-20 course(s). Where a lab is not available and/or where the integration of students is not possible, two alternatives are suggested:

1. Use, with minor modifications, an existing lab/classroom and complement in-class instruction with a considerable number of community partnerships.
2. Establish and use community partners to provide students with on-the-job instruction, under a teacher's supervision, for the majority of the course.

OTHER LEARNING RESOURCES

Ashburn, Alice B. *Fashion and Fundamentals*. Extension, Instruction and Materials Centre, the University of Texas at Austin, 1984. (An answer book is also available.)

Complete Guide to Sewing. Reader's Digest Association (Canada) Ltd., 1979.

Friend, Cathy; Parker, Frances and Jeanette Weber. *Clothing: Fashion, Fabrics, Construction*. Teacher's Manual. Bennett and McKnight, 1986.

Graef, J.R., and J.B. Strom. *Concepts in Clothing*. (1st Canadian edition.) McGraw-Hill Ryerson, 1979.

Kefgen, M., and P. Touchie-Specht. *Individuality in Clothing Selection and Personal Appearance*. (3rd edition.) Collier Macmillan, 1981.

Lopez, Karen; Richmond, Mary and Ramona Rowan. *Clothing: Fashion, Fabrics, Construction*. Teacher's Resource Book. Bennett and McKnight, 1986.

Weber, Jeanette. *Clothing: Fashion, Fabrics, Construction*. Bennett and McKnight, 1986.

Various brochures, booklets and other information may be obtained from the following sources:

Alberta Consumer and Corporate Affairs
3rd Floor, Capilano Centre
9945 - 50 Street
Edmonton, Alberta
T6A 0L4
Telephone: (403) 427-5782

Mailing address:
Box 1616
Edmonton, Alberta
T5J 2N9

Alberta Professional Dry Cleaner's Association
P.O. Box 1048
Red Deer, Alberta
T4N 6S5
(The telephone number of the association's president will change each year. Contact should be made through a local drycleaning operation.)

Alberta Safety Council
201, 10526 Jasper Avenue
Edmonton, Alberta
T5J 1Z7
Telephone: (403) 428-7555

Both the Alberta and the Canada Safety Councils provide safety information in the areas of:

- Drycleaning and pressing
- Spotting or spot removing
- Pressing or garment finishing
- Safety of auxiliary drycleaning employees
- Use of sewing machines, tools
- Fabric testing, cleaning and repairs.

Canadian Cleaner and Launderer
P.O. Box 968
Oakville, Ontario
L6J 5E8
Telephone: (416) 825-2415

Consumer and Corporate Affairs Canada
Edmonton District Office
10225 – 100 Avenue
Edmonton, Alberta
T5J 0A1
Telephone: (403) 420-2485

DOW Chemical Company
Modelind Road
P.O. Box 1012
Sarnia, Ontario
N7T 7K7

Brochures available include:
- Drycleaning: A Basic Handbook
- How to Get Along with Your Solvent
- Safety is Good Business, Make it a Part of Yours.

TEACHER SUPPORT MATERIAL

HAIR CARE 26

COURSE SEQUENCE

Hair Care 26 is the intermediate course in the Hair Care 16-26-36 sequence. This sequence has been developed as four occupational courses that comprise the personal and public services occupational cluster.

Hair Care 26 orients students to major areas of the personal service industry. Students who indicate a strong desire or interest in pursuing jobs in the hair and beauty industry should be encouraged to explore the related courses of esthetology and business services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the hair care sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should be encouraged to enrol in the vocational beauty culture program.

ENTRANCE REQUIREMENT

Students taking Hair Care 26 must have completed satisfactorily Hair Care 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools already offering a beauty culture program may wish to integrate teaching Hair Care 26 in the beauty culture lab with Beauty Culture 12-22 course(s). Where a lab is not available and/or where the integration of students is not possible, two alternatives are suggested:

1. Use, with minor modifications, an existing lab or classroom.
2. Establish and use community partners to provide students with on-the-job instruction, under a teacher's supervision, for the majority of the Hair Care 26 course.

Major requirements for adopting the first alternative include the availability of:

- adjacent electrical outlets (2) for each student in the course
- basic tools and hair and beauty supply items
- suitable sanitary aids common to a beauty shop or lab (e.g., washer, dryer, sanitary and secure storage areas)
- suitable sinks and hot and cold water facilities
- suitable tables at wall stations that will hold clamp-type mannequin stands
- wall-mounted or self-supporting table mirrors.

The estimated equipment, tools and supply needs for each student in Hair Care 26 are:

- blow-dryer (1200 watts)
- chemicals (e.g., assorted shampoos, rinses, conditioners, hydrogen peroxide, permanent waving lotion)
- curling iron (professional grip)
- detangler (1)
- haircutting scissors (1 pair)

- hair goods (e.g., assorted human hair, synthetic fibre wigs, hairpieces)
- Nitrazene paper (i.e., pH testing strips or rolls)
- nylon or plastic cape
- rollers (4 dozen, assorted sizes)
- roller clips (1 box)
- setting combs (2)
- setting mannequin and stand
- tail comb (1)
- towels (4)

OTHER LEARNING RESOURCES

Colletti, Anthony B. *A Complete Question and Answer Guide to Hairdressing and Cosmetology*. Keystone Publications, 1978.

Dalton, John W. *The Professional Cosmetologist*. (3rd edition.) West Publishing Co., 1983. (Authorized Text.)

Manfredonia, Salvatore J. *28 Styles for Student Practice*. Milady Publishing Corp., 1983.

Simpson, Sim (ed.). *Curling Irons*. Milady Publishing Corp., 1969.

TEACHER SUPPORT MATERIAL

COMMERCIAL FOOD PREPARATION 26

COURSE SEQUENCE

Commercial Food Preparation 26 is the intermediate course in the Commercial Food Preparation 16-26-36 sequence. This sequence has been developed as three occupational courses that comprise the tourism and hospitality occupational cluster.

Commercial Food Preparation 26 orients students to a major area of the tourism and hospitality industry. Students who indicate a strong desire or interest in pursuing jobs in this industry should be encouraged to explore the related courses of food services and maintenance and hospitality.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the commercial food preparation sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should be encouraged to enrol in the regular vocational food preparation program.

ENTRANCE REQUIREMENT

Students taking Commercial Food Preparation 26 must have completed satisfactorily Commercial Food Preparation 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools already offering a food preparation program may wish to integrate teaching Commercial Food Preparation 26 in the cafeteria or lab with the food preparation course. Where a lab is not available and/or where the integration of students is not possible, two alternatives are suggested:

1. Use, with minor modifications, an existing classroom or home economics lab
2. Establish and use community partners to provide students with on-the-job instruction, under a teacher's supervision, for the majority of the Commercial Food Preparation 26 course.

Teachers are encouraged to establish, use and monitor community partners to provide students with on-the-job experiences during the course.

The following tools and equipment are recommended for teaching Commercial Food Preparation 26. If major items of equipment are not available, the use of community partners is suggested.

- Commercial-style kitchen containing:
  - Sets of basic kitchen utensils, implements and equipment suitable for commercial cutting, chopping, spreading, serving, measuring, mixing, etc.
  - Grills, stoves and ovens for cooking and baking commercial quantities of food
- Cleaning and sanitation equipment
- Serving dishes and utensils
- Suitable storage for food products and supplies.

OTHER LEARNING RESOURCES

Canada Food Guide Handbook (Revised), 1982.

This is a multi-media set of six videotapes and support materials. The following topics are addressed:

1. Food delivery and storage
2. Food preparation
3. Personal hygiene
4. Temperature control
5. Pest control
6. Basic cleaning.

Catering with Care: Health, Hygiene and Safety

Available from:

Filmwest Associates
10619 - 124 Street
P.O. Box 11028
Edmonton, Alberta
T5J 3K3

Food Production, Management and Services. Mid-America Vocational Consortium, Stillwater, Oklahoma.

Food Preparation: Basic Guidelines for Baking, Frying and Salads. Proctor and Gamble Educational Series, Toronto, Ontario, 1982.

Marsh, B. *Professional Cookery.* McGraw–Hill Ryerson Limited, 1985.

Public Health Act, Food Regulation. Province of Alberta.

Ray, M. F., and B. A. Dondi. *Professional Cooking and Baking.* Glenco Publishing, 1981.

The following learning resources are published to support this text:

- Recipe File, M. F. Ray, 1981
- Student Activity Guide, 1981
- Student Workbook, 3rd Edition, 1988
- Teacher Resource Guide, 3rd Edition, 1988.

Wattie, H., and E. D. Whyte. *Canadian Cookbook* (SI Metric Edition), McGraw–Hill Ryerson Limited, 1977.

TEACHER SUPPORT MATERIAL

FOOD SERVICES 26

COURSE SEQUENCE

Food Services 26 is the intermediate course in the Food Services 16-26-36 sequence. This sequence has been developed as three occupational courses that comprise the tourism and hospitality occupational cluster.

Food Services 26 orients students to a major area of the tourism and hospitality industry. Students who indicate a strong desire or interest in pursuing jobs in the food industry should be encouraged to explore the related courses of Commercial Food Preparation 26 and Business Services 26.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the food services sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should be encouraged to enrol in the regular vocational food preparation program.

ENTRANCE REQUIREMENT

Students taking Food Services 26 must have completed satisfactorily Food Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools already having a food preparation program may wish to integrate teaching Food Services 26 in the cafeteria and lab with the Food Preparation 12-22 course(s). Where a lab is not available and/or where the integration of students is not possible, the alternatives are:

1. Use, with minor modifications, an existing kitchen area, food lab, classroom, staff dining room/lounge. Major requirements for adopting this alternative include the availability of:
   - cash register or cash drawer
   - serving equipment, tools and supplies
   - sidestand or equivalent
   - suitable sink, cloakroom, changing room
   - suitable space to create various types of food service layouts
   - tables and chairs to run facility
   - tableware--dishes, flatware, glassware.
2. Establish and use community partnership opportunities to provide students with on-the-job learning experiences, under a teacher's supervision.

OTHER LEARNING RESOURCES

Catering With Care: Health Hygiene and Safety
Available from:
Filmwest Associates
10619 - 124 Street
P.O. Box 11028
Edmonton, Alberta
T5J 3K3

This is a multimedia set of six videotapes and support materials that focus on:

1. Food delivery and storage
2. Food preparation
3. Personal hygiene
4. Temperature control
5. Pest control
6. Basic cleaning.

Food and Beverage Service. (Instructor's Guide.) Educational Institute of the American Hotel and Motel Association.

Food Production, Management and Services. Mid-America Vocational Consortium, Stillwater, Oklahoma.

Public Health Act, Food Regulation. Government of Alberta.

Travel Alberta, Edmonton, Alberta (telephone (403) 427-7612). Films, tapes and other materials may be available.

RESOURCE CENTRES

Alberta Tourism and the Alberta Tourism Education Council have lists of current resources that may be available to schools.

Alberta Tourism
Industry Services
3rd Floor City Centre Building
10155 – 102 Street
Edmonton, Alberta T5J 4L6
Telephone: 427-7612
Fascimile: 427-0778

Alberta Tourism Education Council
1700 Standard Life Centre
10405 Jasper Avenue
Edmonton, Alberta T5J 3N4
Telephone: 422-0781
Fascimile: 422-3430

TEACHER SUPPORT MATERIAL

MAINTENANCE AND HOSPITALITY SERVICES 26

COURSE SEQUENCE

Maintenance and Hospitality Services 26 is the intermediate course in the Maintenance and Hospitality Services 16-26-36 sequence. This sequence is one of three occupational courses that comprise the tourism and hospitality occupational cluster.

Maintenance and Hospitality Services 26 orients students to a major area of the tourism and hospitality industry. Students who indicate a strong desire or interest in pursuing jobs in this industry should be encouraged to explore the related courses of commercial food preparation, food services, horticultural services, building services and construction services.

Students demonstrating appropriate interests, attitudes, levels of participation, and basic competencies should be encouraged to complete the maintenance and hospitality services sequence and consider complementing it with one or more related course sequences.

ENTRANCE REQUIREMENT

Students taking Maintenance and Hospitality Services 26 must have completed satisfactorily Maintenance and Hospitality Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Where a lab is not available and/or where the integration of students is not possible, three alternatives are suggested:

1. Use caretaking equipment and resources in the school.
2. Use, with minor modifications, an existing classroom or home economics lab.
3. Establish and use community partners to provide students with on-the-job instruction, under a teacher's supervision, for the majority of the Maintenance and Hospitality Services 26 course.

Major requirements for adopting the first alternative include the availability of:

- suitable sink (preferable floor) facilities
- sufficient electrical outlets to run a number of machines
- proper storage areas
- basic equipment, tools and supplies for Maintenance and Hospitality 26.

The suggested equipment, tools and supplies for Maintenance and Hospitality 26 are:

EQUIPMENT

Chalkboard
Chemical storage area and cabinet
Garbage bins
Garbage cans
Garbage receptacles
Ladders
Power floor machines
Pressure washer
Utility carts
Vacuum cleaners
Wet-floor signs

TOOLS

- Assorted hand tools
- Brooms
- Brushes
- Carpet and upholstery cleaning equipment
- Chalkbrushes
- Dust mop tray
- Dustpans
- Floor squeegees
- Mops (floor, finish, dust, wet)
- Pads (stripping, abrasive, polishing)
- Pails with wringer attachments
- Plumbing augers
- Safety glasses/face shields
- Sponges
- Tape measures
- Toilet plunger
- Vinyl aprons
- Vinyl gloves
- Window squeegees

SUPPLIES

- Chalk
- Chemical cleaners
- Chemical disinfectants
- Electrical tape
- Extension cord parts
- Garbage cans
- Pressure washer soap
- Rags

OTHER LEARNING RESOURCES

Betts, R.M. (ed.) *Teacher's Guide for Exploring the Construction Industry.* McKnight Publishing Company, 1976.

Gellnev, S. (ed.) *Do It Yourself Flooring* (1st Edition). Lane Publishing, 1982.

Griflin, W.R. *Comprehensive Custodial Training Manual.* Cleaning Consultant Services Inc., Seattle, Washington, 1985.

School Plant Maintenance Manual. School Plant Officials Society of Alberta, 1988.

Smith, E.R. *Custodial Curriculum.* Curriculum Development Project, Final Report, Renton Vocational Technical Institute, 1986.

Vandervort, D.W. (ed.) *Basic Carpentry* (1st Edition). Lane Publishing, 1972.

Weiss, W. *Home Maintenance* (2nd Edition). Glenco Publishing, 1983.

Wilks, G., M. Stokes. *Building Service Worker Curriculum for Special Needs Students.* Alberta Vocational Centre, 1987.

Instructional Safety Objectives. FW Vocational/Technical Training Courses. Canada Safety Council.

Other materials are available from:

Alberta Workers' Health, Safety and Compensation
Contact: Occupational Hygiene Branch Offices:
9321 - 48 Street
Edmonton, Alberta
T6B 2R4
(403) 427-4792

2nd Floor, 1021 - 10 Avenue, S.W.
Calgary, Alberta
T2R 2B7
(403) 261-2188

Health and Welfare Canada
Contact: Health Protection Branch
Health and Welfare Canada
Ottawa, Ontario
K1A 1B4

TEACHER SUPPORT MATERIAL

AUTOMOTIVE SERVICES 26

COURSE SEQUENCE

Automotive Services 26 is the intermediate course in the Automotive Services 16-26-36 sequence. This sequence is one of three occupational courses that comprise the transportation occupational cluster.

Automotive Services 26 orients students to a major area of the automotives industry. Students who indicate a strong desire or interest in pursuing jobs in the automotives field should be encouraged to explore the related courses of service station services, agricultural mechanics, and warehouse services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the automotive services sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should be encouraged to enrol in the regular vocational automotives program.

ENTRANCE REQUIREMENT

Students taking Automotive Services 26 must have completed satisfactorily Automotive Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools already having an automotives program may wish to integrate teaching Automotive Services 26 in the automotives lab with the vocational automotives courses. Teachers are encouraged to establish and use community partners to provide students with on-the-job instruction, under a teacher's supervision, for the majority of the Automotive Services 26 course.

Automotives Services 26 should be taught in a lab or shop designed for automotive work, and a suitably qualified teacher and/or supervisor should be available to direct the learning process and to ensure that necessary safety practices are followed.

Basic equipment suggested for Automotive Services 26 are:

EQUIPMENT

Air compressor
Carburetor mounting fixture
Engine stand
Floor jack
Hoist
Oil drain mobile
Pressure washer
Safety stands
Tire balancer
Tire changer
Tire tank
Vacuum cleaner
Waste oil storage tank

TOOLS

Bleeding bottle and hose
Brake tool sets
Car wash brush
Compressor tester
Cooling system pressure tester kit
Grease gun
Oil pressure test kit
Outside micrometre, imperial 0-1 inches
Outside micrometre, metric 0-25 mm
Ratchet and socket sets
Screwdriver sets
Vacuum tester kit
Wrench sets

AUDIO-VISUAL

Overhead projector
Overhead transparencies
Projection screen

PRINTED MATERIAL

Assorted automotive textbooks
Automotive parts charts
Parts books
Shop reference set

COMPONENTS AND SAMPLES

Carburetors
Disc brake unit
Engine parts
Engine samples
Fastener sample kit
Front drum brake unit w/o adjusting mechanism
Measuring sample kit
Rear bendix brake unit
Rims
Tires

OTHER LEARNING RESOURCES

Alley, Walter and Walter Billiet. *Disc and Drum Brake Service* (2nd Edition). American Technical Society, 1974.

Barbarossa, Fred. *The Car Care Book* (1st Edition). South-Western Publishing, 1983.

Crouse, William. *Automotive Mechanics* (2nd Canadian Edition). McGraw-Hill Ryerson Limited, 1987. (Approved basic learning resource for automotives.)

Crouse, William. *Automotive Service Business* (1st Edition). McGraw-Hill Ryerson Limited, 1973.

Disc Brake Manual (#9424). Ammco Tools Inc.

Hoyt, Wade and Ian Walter (ed.). *Complete Car Care Manual* (1st Edition). The Readers' Digest Association, 1981.

Kelley, Lee (ed.) *Basic Automotive Tune Up and Test Equipment.* Petersen Publishing, 1977.

Nash, Frederick C. *Automotive Technology* (3rd Edition). McGraw-Hill Ryerson Limited, 1986.

Stockel, Martin. *Auto Mechanics Fundamentals* (3rd Edition). Goodheart-Wilcox, 1978.

Stockel, Martin. *Auto Service and Repair* (3rd Edition). Goodheart-Wilcox, 1978.

Thiessen, Frank and Davis Dales. *Automotive Principles and Service* (2nd Edition). Prentice-Hall Canada Ltd., 1984. (Approved basic learning resource for automotives.)

Thiessen, Frank and Davis Dales. *Automotive Principles and Service Study Guide and Workbook* (1st Edition). Reston Publishing, 1981.

Other references should include:

Automotive Accessories and Supply Catalogues
Automotive/Industrial Supply House Catalogues
Automotive Periodicals
Automotive Tool and Equipment Supply House Catalogues
Telephone Advertising Directories.

TEACHER SUPPORT MATERIAL

SERVICE STATION SERVICES 26

COURSE SEQUENCE

Service Station Services 26 is the intermediate course in the Service Station Services 16-26-36 sequence. This sequence is one of three occupational courses that comprise the transportation occupational cluster.

Service Station Services 26 orients students to a major area of the automotives services industry. Students who indicate a strong desire or interest in pursuing jobs in the automotives field should be encouraged to explore the related courses of automotives services, agricultural mechanics, and warehouse services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the service station services sequence and consider complementing it with one or more related course sequences.

Students with particular adeptness and interest should be encourage to enrol in the regular vocational automotives program.

ENTRANCE REQUIREMENT

Students taking Service Station Services 26 must have completed satisfactorily Service Station Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools already having an automotives program may wish to integrate teaching Service Station Services 26 in the automotives lab with the Vocational Automotives 12-22 courses. Teachers are encouraged to establish and use community partners to provide students with on-the-job instruction, under a teacher's supervision, for the majority of the Service Station Services 26 course.

Basic equipment suggested for Service Station Services 26 are:

EQUIPMENT

Air compressor
Cooling system pressure tester kit
Creepers
Floor jack
Gear oil pump
Grease gun
Hoist
Impact wrench
Oil drain mobile
Power flusher
Pressure washer
Safety stands
Time clock
Tire balancer
Tire changer
Tire tank
Trouble lights
Vacuum cleaner
Waste oil storage tank

TOOLS

Adjustable wrenches
Air lines and hoses
Antifreeze hydrometer
Battery cable clamp puller
Battery filler jug
Battery terminal brush (post cleaner)
Drain pans
Funnels
Hammers
Impact socket set
Inspection mirror
Oil filter wrench
Pliers
Punches and chisels set
Ratchet and socket set
Screwdriver set
Tire air chuck
Tire patch stitcher
Tire plug installation tool
Tire plug rasp
Tire pressure gauge
Valve core tool
Valve stem tool
Wheel weight pliers
Wrench set

FUEL SALES EQUIPMENT

Bulk fuel tanks
Business forms
Credit card imprinter
Dipping stick
Fuel pumps
Tank charts
Telephone.

OTHER LEARNING RESOURCES

Barbarossa, Fred. *The Car Care Book* (1st Edition). South-Western Publishing, 1983.

Car Care Guide. Check Chart Division of H.M. Gousha Co., 1980.

Crouse, William. *Automotive Mechanics* (2nd Canadian Edition). McGraw-Hill Ryerson Limited, 1987. (Approved basic learning resource for automotives.)

Crouse, William. *Automotive Service Business* (1st Edition). McGraw-Hill Ryerson Limited, 1973.

Hoyt, Wade and Ian Walter (ed.) *Complete Car Care Manual* (1st Edition). The Readers' Digest Association, 1981.

Leaking Underground Storage Tanks. Environment Canada (Resource 2).

Management of Underground Petroleum Storage Inventory. The National Automotive Trades Association of Canada (Resource 3).

Nash, Frederick C. *Automotive Technology* (3rd Edition). McGraw-Hill Ryerson Limited, 1986.

Stockel, Martin. *Auto Service and Repair* (3rd Edition). Goodheart-Wilcox, 1978.

Retail Gasoline Dealers Association of Nova Scotia. *Gasoline and Diesel Oil Meter and Dip Book*. Automotive Retailer Association (Alberta), (Resource 1).

Thiessen, Frank, and Davis Dales. *Automotive Principles and Service* (2nd Edition). Prentice-Hall Canada Inc., 1984. (Approved basic learning resource for automotives.)

Automotive Retailers Association
(Alberta)

Gasoline and Diesel Oil Meter and Dip Book

©RGDA of N.S., 1987

RECOMMENDED BY
ALBERTA DEPARTMENT OF LABOR
FIRE PREVENTION BRANCH

ALBERTA ENVIRONMENT
PROVINCE OF ALBERTA

ENVIRONMENT CANADA
OTTAWA

Dates:
From ____________________ To ________________________
Station:
Name ____
Address ____

DIPPING THE TANKS

Tank gauging is the method for measuring the level of product in a storage tank so the gross volume can be calculated via a tank calibration table. To use faulty equipment or improper techniques is of no benefit. Consequently, to insure the most accurate gauging is obtained, the following must be noted:

1. Always use a gauge stick of proper design.

2. Never use a gauge stick which has a weathered condition. A weathered stick will cause the product to "creep" indicating an inaccurate product level.

3. Never drop or bounce the gauge stick in the tank. These actions create product splash, indicating an inaccurate product level. In addition, dropping or bouncing the gauge stick could puncture a fibreglass storage tank.

4. Always lower the gauge stick slowly into the tank until it "taps" bottom, then remove immediately, reading the product cut level to the nearest cm.

5. Never gauge a tank for determining product loss/gain at a time different from taking meter readings and/or while the tank is in use as a dispenser.

6. Always verify tankage for water by using water finding paste at each gauging and reduce product volume by the water amount. If the water level changes, call your oil company representative immediately.

7. Never use the tank gauge from only one tank which is manifolded to another tank as the gauge representing both tanks. All tankage must be gauged separately.

8. Always insure the proper tank calibration table is used for the particular tank(s) being gauged.

GASOLINE AND DIESEL DAILY INVENTORY CONTROL RECORD

DATE:

TIME:

	PUMP METER READINGS			
PUMP NO.	PREMIUM UNLEADED	REGULAR UNLEADED	REGULAR LEADED	DIESEL
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
(A) Total Today's Closing Pump Meter Readings				
(B) Total Yesterday's Closing Pump Meter Readings				
(C) Total Litres Dispensed Today (A minus B)				

STORAGE TANK DIPS			
TANK	PRODUCT LEVEL (cm)	LITRES	WATER LEVEL (cm)
PREMIUM UNLEADED			
1			
2			
TODAY'S Tank Dip Totals (enter in Line G)			
REGULAR UNLEADED			
1			
2			
TODAY'S Tank Dip Totals (enter in Line G)			
REGULAR LEADED			
1			
2			
TODAY'S Tank Dip Totals (enter in Line G)			
DIESEL			
1			
2			
TODAY'S Tank Dip Totals (enter in Line G)			

(D) Opening Inventory (i.e. Yesterday's Tank Dip Totals)				
(E) Products Purchased This Date				
(F) Tank Inventory to Be Accounted for Today (D Plus E)				
(G) Inventory On Hand (TODAY'S Tank Dip Totals)				
(H) Gone from Tanks Today (F minus G)				
SHORTAGE (IF H GREATER THAN C)	(–)	(–)	(–)	(–)
OVERAGE (IF C GREATER THAN H)	(+)	(+)	(+)	(+)

PRODUCTS PURCHASED THIS DATE

Invoice No. ________

Time of Delivery ________

Product	Quantity*
Premium Unleaded	
Regular Unleaded	
Regular Leaded	
Diesel	

(*Enter these numbers in Column "E")

MONTHLY PETROLEUM PRODUCT INVENTORY SUMMARY

MONTH

YEAR

	PREMIUM UNLEADED		REGULAR UNLEADED		REGULAR LEADED		DIESEL	
	DAILY (+OR -)	CUMULATIVE (+OR -)	DAILY (+OR -)	CUMULATIVE (+OR -)	DAILY (+OR -)	CUMULATIVE (+OR -)	DAILY (+OR -)	CUMULATIVE (+OR -)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
	(+)	NO. OF DAYS	(+)	NO. OF DAYS	(+)	NO. OF DAYS	(+)	NO. OF DAYS
	(–)	NO. OF DAYS	(–)	NO. OF DAYS	(–)	NO. OF DAYS	(–)	NO. OF DAYS

- Show the number of days in the month you have overages (+)
- Show the number of days in the month you have shortages (–)

PLEASE NOTE: If the total number of minuses (–) (i.e., shortages) for any product exceeds eighteen (18) in any one month, this would indicate a possible problem. The problem could be theft, bookkeeping errors, inaccurate pump meters, tank truck delivery errors, or leaks in underground storage tanks and or piping.

CHECK IT OUT. If you suspect a leak, notify your supplier immediately for further advice. If you know you have a leak, immediately notify your sales representative and appropriate authorities.

STOCK MEASUREMENT

Receipt for Product Delivered by Tank Truck

The attendant should ensure that the product delivery form has been completed properly. Verify that the quantity of product delivered, together with the opening and closing dips are recorded on the delivery form by the driver. Maintain the delivery form on file for future auditing requirements. The amount of product delivered must be taken into account when comparing the tank dip measurement with the volume recorded on the delivery form.

Use of tank charts: Tank charts are supplied by the tank manufacturer and provide a listing of gallons (litres) beside the equivalent inches (centimetres) of measurement as registered on the gauge (dip) stick.

After using the dip-stick to determine the depth of liquid in the tank, select the proper column on the tank chart and proceed as follows:

1. For dip-stick measurements which are to the exact inch or centimetre, record the product volume from the chart.
2. For dip-stick measurements which are 1/2" or 1.25 cm over or under the exact inch or centimetre, proceed as follows:
   - (i) Note the two measurements on the chart for the exact inch (cm) readings which are above and below the actual reading on the dip-stick.
     For example, If the dip-stick reading for liquid in a 5000 gal. tank (22730 litres) is 48.5 inches (121.25 cm), note the chart volume at 49 inches (122.5 cm) and 48 inches (120 cm).
   - (ii) Subtract the volume shown on the scale for these two readings:

     Chart reading at 49 inches (122.5 cm) = 3039 gal. (13816 litres)
     Chart reading at 48 inches (120 cm) = 2963 gal. (13470 litres)

     Difference = 76 gal. (346 litres)
   - (iii) Multiply this volume by .5 (1/2 inch or 1.25 cm)

     76 gal. (346 litres) × .5 = 38 gal. (173 litres)
   - (iv) Add the volume shown on the chart opposite the exact inch (cm) measurement to the 1/2 inch (1.25 cm) volume calculated in (iii):

     Volume at 48 inches (120 cm) = 2963 gal. (13470 litres)
     Volume at 1/2 inch (1.25 cm) = 38 gal. (173 litres)

     Total = 3001 gal. (13643 litres)

     In this example, the liquid volume measurement for the dip-stick measurement at 48.5 inches (121.25 cm) indicates 3001 gal. (13643 litres) of liquid in the tank.

3. If the above volume includes some water (as identified by the water detection paste), the actual volume of petroleum product is determined by subtracting the indicated amount of water from the total volume of liquid.

   Reference the above measurements of 3001 gals. (13643 litres) of liquid in the tank, if the indicated water gallons are 50 gal. (227 litres) the actual volume of petroleum product is:

	3001 gal.	(13643 litres)
less	50 gal.	(227 litres)
Total =	2951 gal.	(13416 litres)

Note: It is important **not** to subtract the water dip from the total dip until the volumes are determined from the tank chart.

For permission to reprint copyrighted material, grateful acknowledgement is made to the Gasoline Dealers Association of Nova Scotia.

Fact Sheet

Leaking underground storage tanks

The old saying, "out of sight out of mind" applies perfectly to one of Canada's most difficult and potentially damaging, yet relatively unknown, environmental problems -- leaking underground storage tanks. Leakage from underground storage tanks can pose a very real threat of contamination to groundwater and to the safety of nearby residents.

Because these tanks are literally out of sight, it can be very difficult to monitor their condition and the possibility of leakage. When leakages do occur, it is often too late to prevent environmental damage, despite costly remediation efforts. Even after extensive cleanup, at least 50 per cent of leaked substances remain in the ground.

The Problem

Underground storage tanks are commonly used by all sectors of society as a convenient way of storing fuels. Slightly less than half of underground storage tanks are located at retail gasoline outlets. Many tanks containing gasoline or heating oil are found at customer locations such as taxi fleets, bus lines or farms. Still others are used by industries of all types, large buildings and institutions like hospitals and schools. In the industrial sector, some underground tanks are used to store a variety of chemicals.

Thousands and thousands of underground storage tanks were installed across Canada in the 50s and 60s. Most of these were made of painted or unprotected steel. And, just as cars corrode and rust, so do buried steel tanks. Eventually the rust penetrates the tank and a leak occurs. The rate at which a leak develops is dependent upon many factors, including the corrosive characteristics of the soil around the tank and the quality of the tank's installation. Thus, the useful life of these tanks may vary considerably. In general, it is in the order of 20 to 25 years, and many tanks are now approaching their end.

It is estimated that 5 to 10 per cent of the underground storage tanks now in use are leaking; anywhere from 7,500 to 20,000 tanks. This is a sizeable problem, and as the average age of the tank population increases, the number of leaking tanks is expected to rise dramatically.

While the magnitude of the threat to the public from contaminated groundwater varies across the country according to groundwater usage, the danger to public safety from the seepage of flammable or toxic vapours into basements is national in scope. It is a possibility whenever and wherever tanks leak.

Unprotected steel tanks may quickly corrode causing costly spills and groundwater contamination and can threaten human health.

The Threat to Groundwater

The extent to which Canadians depend upon groundwater, the "invisible resource", is a surprise to many people.

- Approximately 6.2 million people, or 26 per cent of the population of Canada, rely on groundwater for their domestic water supply.
- Approximately 38 per cent of all municipalities rely either entirely or partially on groundwater.
- Approximately 87 per cent of water used for livestock comes from groundwater.
- Prince Edward Island is 100 per cent dependent upon groundwater.
- New Brunswick, Saskatchewan, Nova Scotia and the Yukon Territory depend upon groundwater for about half of their domestic water supplies.

It does not take much of some contaminants to ruin groundwater – the leakage of a mere litre of gasoline from an underground storage tank could render one million litres of water unfit for use.

Everyday materials such as gasoline and heating oil are harmless when properly handled, but trace amounts in the wrong places can spoil water for consumption or create a safety hazard.

Prevention

Once contamination has occurred, effects can persist for decades. Most of the time, proper technology to clean up contaminated aquifers simply does not exist; if it does, it is either impractical or prohibitively expensive. The answer must lie in better early detection to minimize damage and in stronger efforts to prevent releases in the first place.

Whose Problem Is It?

Leakage is of concern to all who rely on groundwater, to those who might be exposed to vapours following a release, to those who own or operate underground storage tanks, and to all Canadians who care about their environment.

The primary responsibility for developing and enforcing legislation dealing with underground storage tanks rests with provincial and municipal authorities. Environment Canada acts as a catalyst to promote better understanding and to increase knowledge of technical and environmental problems among all those who have a stake in the issue.

Under the leadership of Environment Canada, a task force made up of federal, provincial and territorial agencies and the industries concerned is currently working to develop national technical standards for the design, construction, installation and operation of underground tanks for petroleum products.

What Can I Do?

If you are a tank owner or operator, there are measures which you can take to reduce significantly the likelihood of a tank leak, and to minimize the impact of a leak should one occur.

You should institute a sound technical tank management program. Information on this is available from the organizations listed below.

As a minimum you should:

- know the age of your tanks;
- know the material of construction (i.e., steel, fibreglass, etc.);
- carry out an accurate and regular inventory control program, and keep good records where applicable;
- ensure that existing installations meet government regulations and industry standards;
- ensure that new tank installation is done by qualified contractors and is according to government regulations;
- ensure that tanks which are permanently taken out of service are properly decommissioned; and
- report the location of any old abandoned underground tanks to the provincial Department of the Environment or provincial Fire Marshall's Office.

LEAKING UNDERGROUND PETROLEUM STORAGE TANKS

TANK LEAKAGE CAN CAUSE A NUMBER OF PROBLEMS

Reproduced with permission of Environment Canada and the Ministry of Supply and Services, Canada.

Management of Underground Petroleum Storage Inventory

Retail Gasoline
Dealers Association
of Nova Scotia

Automotive Retailers
Association of
British Columbia

Automotive Retailers
Association of Alberta

Association Des Services
de l'automobile Inc.
du Quebec

Automotive Aftermarket
Retailers of Ontario

Prince Edward Island
Retail Gasoline
Dealers Association

Retail Gasoline
Dealers Association
of New Brunswick

Thunder Bay
Association of
Automotive Trades

AUTOMOTIVE
TRADES
ASSOCIATION
OF SASKATCHEWAN

**The National
Automotive Trades Association
of Canada**

The use of these procedures will assist in management of underground tanks and related systems which will result in a high level of safety and pollution control while maximizing profits.

CONTACT YOUR ASSOCIATION IF YOU HAVE ANY QUESTIONS
CONCERNING INVENTORY CONTROL

N.A.T.A. Member Associations

Retail Gasoline Dealers Association of Nova Scotia
Retail Gasoline Dealers Association of Prince Edward Island
Retail Gasoline Dealers Association of New Brunswick
Automotive Service Association Inc. of Quebec
Automotive Aftermarket Retailers of Ontario
Thunder Bay Association of Automotive Trades
Automotive Trades Association of Saskatchewan
Automotive Retailers Association of Alberta
Automotive Retailers Association of British Columbia

INVENTORY CONTROL PROCEDURE — GASOLINE AND DIESEL DAILY INVENTORY CONTROL RECORD

Record all pump meter readings (litres) for each product at close of day. Pumps should be numbered for consistency.

Add individual pump meter readings together for each product and enter these totals in Line "A" under the appropriate product.

Determine pump meter reading totals for each product from Line "A" of the previous day. Enter these totals in Line "B" (Total Yesterday's Closing Pump Meter Readings).

Deduct "B" totals from "A" totals to arrive at the number of litres dispensed for each product this day. (Enter these amounts in Line "C".)

Record the Opening Inventory (in the underground storage tanks) by referring to the quantities that appeared in the "Inventory on Hand" (Line "G") from previous day inventory control record.

Determine today's storage tank inventory to be accounted for by adding together the Opening Inventory and Products Purchased this Date ("D" plus "E").

DATE:

TIME:

PUMP METER READINGS

PUMP NO.	PREMIUM UNLEADED	REGULAR UNLEADED	REGULAR LEADED	DIESEL
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
(A) Total Today's Closing Pump Meter Readings				
(B) Total Yesterday's Closing Pump Meter Readings				
(C) Total Litres Dispensed Today (A minus B)				

STORAGE TANK DIPS

TANK	PRODUCT LEVEL (cm)	LITRES	WATER LEVEL (cm)
PREMIUM UNLEADED			
1			
2			
TODAY'S Tank Dip Totals (enter in Line G)			
REGULAR UNLEADED			
1			
2			
TODAY'S Tank Dip Totals (enter in Line G)			
REGULAR LEADED			
1			
2			
TODAY'S Tank Dip Totals (enter in Line G)			
DIESEL			
1			
2			
TODAY'S Tank Dip Totals (enter in Line G)			

Dip all underground storage tanks for each petroleum product at close of day.

Convert product level (centimetre reading on dip-stick) to litres using the dip conversion chart.

Always check for water when dipping tanks. Apply green water finding paste to bottom 10-12 cm on dip-stick. Water level is indicated by paste turning red. More than 5 centimetres of water or any unaccountable increase indicates a potential leak.

Add and record fuel litres in all tanks for each product and enter TODAY'S Tank Dip Totals for each product in Line "G" (Inventory on Hand).

(D) Opening Inventory (i.e. Yesterday's Tank Dip Totals)				
(E) Products Purchased This Date				
(F) Tank Inventory to Be Accounted for Today (D Plus E)				
(G) Inventory On Hand (TODAY'S Tank Dip Totals)				
(H) Gone from Tanks Today (F minus G)				

SHORTAGE (IF H GREATER THAN C)	(-)	(-)	(-)	(-)
OVERAGE (IF C GREATER THAN H)	(+)	(+)	(+)	(+)

PRODUCTS PURCHASED THIS DATE

Invoice No.

Time of Delivery:

Product	Quantity*
Premium Unleaded	
Regular Unleaded	
Regular Leaded	
Diesel	

(*Enter these numbers in Column "E")

If you received a delivery of product today, record invoice number, time of delivery and quantities (litres) received for each product.

Enter these quantities received in "Line "E" (Products purchased this date).

Determine the amount of each product that left the underground storage tanks today by subtracting the Inventory on Hand (Line "G") from the Tank Inventory to be Accounted for Today (Line "F").

If "Gone from Tanks Today" (Line "H") is greater than "Total Litres Dispensed Today" through the pump meters (Line "C"), you have a shortage.

If "Total Litres Dispensed Today" (Line "C") is greater than 'Gone from Tanks Today" (Line "H"), you have an overage.

Transfer daily shortages and overages to "Monthly Petroleum Product Inventory Summary" available for each month in this book.

BEST COPY AVAILABLE

MANAGEMENT OF UNDERGROUND STORAGE TANK SYSTEMS

Proper management of your underground storage tank system is essential. Accurate daily inventory and stock control and good operating procedures remain the most effective way to ensure that your site is functioning properly, and that any product loss is identified early before there is a serious environmental or safety problem. Remember, SAFETY is your prime concern.

To assist you in maintaining effective records, N.A.T.A. has developed specific procedures for inventory control. A step-by-step documentary of what these procedures involve is shown in the video "Management of Underground Storage Tanks", produced by Ultramar Canada Inc. Copies of this video may be obtained by contacting:

Ultramar Canada Inc.,
Environmental Protection Department
2020 University St.
Montreal, P.Q. H3A 2L4

(514) 499-6425

INVENTORY CONTROL PROCEDURES

The use of these procedures will:

1. Minimize the hazards of pollution from leaking underground tanks and piping.
2. Minimize the hazards of gasoline vapours originating from leaking underground tasks and piping.
3. Minimize product loss.

ALL personnel involved with the handling of bulk petroleum products in underground tank systems must be familiar with inventory procedures and follow them.

I. PRODUCT LOSSES

A. Detection of Product Losses

Product losses can occur in several ways; e.g., leaking tanks and lines, spills, theft and meter errors. These losses may be detected by:

1. Following the procedures for daily product measurement and reconciliation.
2. Regular inspection of fill pipe area to detect evidence of spills.
3. Removal of pump cover and physical inspection for leaks, at least on a quarterly basis. More often is preferred.
4. Inspection of land around the property to detect evidence of gasoline surfacing from a leaking facility.

5. Detection of vapours in the vicinity of the facility.

6. Loss of pump suction or indication of air passing through the pump. These can result from a leaking line or defective foot valve.

7. Accumulation of water in tanks.

B. Indicated Losses Resulting from Errors in Product Level, Measurement or Record Keeping (No Actual Loss of Product)

These types of "apparent" losses, while not causing environmental or safety problems, can result in losses of revenue to your business.

These "apparent" losses can be caused by:

1. **Faulty meter calibration:** If the dispenser meter is not properly calibrated, the actual volume dispensed will not correspond to the meter reading. Reconciliation of meter readings and tank dips would not be possible. Good records including meter maintenance and calibration history should assist in identifying this problem.

2. **Product used from the underground tank when meters are calibrated:** Any product removed from the tank system must be accounted for.

3. **Error in measurement of volume of product in tank:** Tank dips of underground tanks must be made properly and the product level read accurately. Care and accuracy is required when using the tank chart to convert the dip-stick reading to a volume measurement and when recording meter readings.

4. **Errors in arithmetic:** Care must be taken when reconciling tank dips with meter readings to ensure that variations are not produced by errors in arithmetic.

Product variations, which deviate from normal allowances, may be detected by effective inventory control. This can avoid "run outs" and identify potential problems with underground tank leaks.

II. RECEIPT OF PRODUCT DELIVERED BY TANK TRUCK

A. Deliveries to locations where there is an attendant:

1. Ensure that underground tanks are accurately dipped and that measurements are recorded prior to the product being unloaded. Check also to ensure that there is enough space in the underground tanks to accommodate safely the quantities to be unloaded.

2. If product is not being metered off, check the marker level to determine how much product is in each compartment.

3. All underground tanks must be colour coded and labeled to identify the product stored. All manifold discharge valves on the vehicle must be tagged to identify the product. Before any unloading is started ensure the correct product is being unloaded into the proper tank.

4. After the delivery is completed, check that each compartment is empty.

5. Dip the tanks again. Compare the volume increase to the amount delivered. The two figures should be the same once any sales through the pump during the delivery process are taken into account.

6. Verify that the delivery record is correct and tnat both the dips and amount delivered are entered correctly on the form.

7. Enter the invoiced totals on the daily record and file the delivery forms.

B. Deliveries to locations where there is no attendant:

1. Check that a product delivery form has been left at the location by the driver and that it includes the following entries:

   a. the quantity of product delivered;
   b. an opening delivery dip; and
   c. a closing delivery dip.

2. Dip the tanks to verify the "closing" dips on the delivery form before opening for business.

IMPORTANT
Contact your supply point **immediately** if:
— a delivery form was not left; and/or
— the detail on the form is incomplete or illegible; and/or
— there was a spill of product around the fill pipe; and/or
— your dip varies more than 8 centimetres with the product quantity entry on the delivery form; and/or
— the dipped quantity received varies from the delivery form by more than 0.5%.

III. MEASUREMENT OF PRODUCT IN UNDERGROUND TANKS – MUST BE DONE AT LEAST ONCE PER DAY

A. Use of gauge (dip) sticks to measure volume of product in the tank:

1. Check condition of gauge (dip) stick. To ensure an accurate reading, the stick should not be frayed or have any missing numbers.

2. Coat the bottom 8 centimetres of the dip-stick with a thin, even film of water detection paste. The coating should be on the side of the dip-stick with the graduated depth markings. (The paste is unaffected by gasoline but changes colour when in contact with water.)

3. Remove the underground tank fill cap and lower the dip-stick slowly into the fill pipe of the tank until the tip of the stick touches the tank bottom.
   CAUTION: Do not drop or bounce the stick. This can create product splash and give you an inaccurate reading, as well as damage the tank bottom.

4. Hold the dip-stick inside the tank for the time period specified for use of water detection paste.

5. Withdraw the dip-stick and read the product and water "cuts" to the nearest 1.0 centimetre and record.

6. Use a cloth to wipe off the petroleum product and detection paste and repeat the above procedure to ensure accurate measurement.

7. Replace the tank fill cap and secure.

8. Repeat this procedure for each tank.

9. Record your readings in the appropriate boxes on the daily dip form.

B. Use of tank charts:

Tank charts are supplied by the tank manufacturer and provide a listing of litres beside the equivalent centimetres of measurement as registered on the gauge (dip) stick. The conversion readings on the charts progress two centimetres at a time. After using the dip-stick to determine the depth of liquid in the tank, select the proper column on the tank chart and proceed as follows:

1. Dip-stick measurements are to the nearest centimetre.

2. Tank charts are usually in increments of 2 centimetres. If the dip-stick reading is an even number, determine the total volume in the tank and the quantity of water. To determine the actual amount of product subtract the water (if present) from the total volume. (Note: For odd numbers see 4. below.)

3. Record this figure (volume in litres) in the box on the Inventory Control Record.

4. For dip-stick measurements that are an odd number:

   a. Note the conversion for the even centimetre readings above and below the actual reading on the dip-stick.

   b. Determine the difference by subtracting the higher amount from the lower amount.

   c. Divide the difference by 2 and add this figure to the lower amount and record this figure as the volume.

   For example:
   If your reading is 139 centimetres:
   — 140 cm on the chart reads 14605.
   — 138 cm on the chart reads 14349.
   — Subtract to determine the difference, 14605 - 14349 = 256.
   — Divide this figure by 2 and add to lower amount, 256/2 = 128 + 14349 = 14477.
   — Use 14477 litres as the volume.

   Note: This procedure is used for both the product and the water volumes.

IV. RECONCILIATION OF TANK MEASUREMENTS AND BOOK INVENTORY

A. Procedures for Reconciliation of Tank Measurements

The purpose of this reconciliation procedure is to verify the pump meter readings and/or to identify unaccounted for differences between tank measurements and meter readings. A Daily Inventory Control Record form has been supplied and provides a means to:

a. establish a consistent format for completing the reconciliation procedure;

b. maintain a daily record (ledger) of the meter readings, tank dips, and overages and shortages.

Normally pump readings are taken after the last sale of the day or when it is not busy. **If readings are taken at different times, the product sold will show up as a shortage.**

1. Assign each nozzle of each pump a number so that you can record that particular reading at the same place on the record sheet each time. This makes it easier to track down which pump has a problem.
2. Record pump meter readings for each product.
3. Total the figures for each product.
4. Enter totals on the record sheet as "**Today's** Closing Pump Meter Readings" **(Block A)**.
5. Enter "**Yesterday's** Closing Pump Meter Totals" (from yesterday's sheet) below today's readings **(Block B)**.
6. Subtract yesterday's figures from today's to determine the "Total Litres Dispensed Today" **(Block C)**.
7. Enter "**Yesterday's** Tank Dip Totals" as today's "Opening Inventory" **(Block D)**.
8. Transcribe quantity figures from the section "Products Purchased This Date" to columns in **(Block E)**.
9. Total figures in Blocks D and E to determine the "Tank Inventory to Be Accounted for Today" **(Block F)**.
10. Transcribe today's dip totals from the section "Storage Tank Dips" to columns for "Inventory On Hand" **(Block G)**.
11. Subtract figures in Block G from those in Block F to determine the amount of product "Gone from Tanks Today" **(Block H)**.
12. Compare the amount of product gone from the tanks today **(Block H)** to the amount of litres dispensed today **(Block C)**.
    a. If the amount dispensed is greater than the amount gone from the tanks, enter amount as an **overage**.
    b. If the amount gone from the tanks is greater than the amount dispensed, enter amount as a **shortage**.

An example of a completed Daily Inventory Control Record can be found on the following page.

GASOLINE AND DIESEL DAILY INVENTORY CONTROL RECORD

DATE:

TIME:

PUMP METER READINGS				
PUMP NO.	PREMIUM UNLEADED	REGULAR UNLEADED	REGULAR LEADED	DIESEL
1	145990	427059	126101	
2	112758	436338	335057	
3		212017		
4		153874		
5				
6				
7				
8				
9				
10				
11				
12				
(A) Total Today's Closing Pump Meter Readings	259248	1229288	461158	
(B) Total Yesterday's Closing Pump Meter Readings	257825	1221487	457320	
(C) Total Litres Dispensed Today (A minus B)	1423	7801	3838	
(D) Opening Inventory (i.e. Yesterday's Tank Dip Totals)	10486	11256	9211	
(E) Products Purchased This Date	12000	13611	6000	
(F) Tank Inventory to Be Accounted for Today (D Plus E)	22486	24867	15211	
(G) Inventory On Hand (TODAY'S Tank Dip Totals)	21106	16884	12545	
(H) Gone from Tanks Today (F minus G)	1380	7983	2428	
SHORTAGE (IF H GREATER THAN C)	(-)	(-) 182	(-)	(-)
OVERAGE (IF C GREATER THAN H)	(+) 43	(+)	(+) 142	(+)

STORAGE TANK DIPS			
TANK	PRODUCT LEVEL (cm)	LITRES	WATER LEVEL (cm)
PREMIUM UNLEADED			
1	194	21106	0
2			
TODAY'S Tank Dip Totals (enter in Line G)		21106	
REGULAR UNLEADED			
1	218	23454	0
2			
TODAY'S Tank Dip Totals (enter in Line G)		23454	
REGULAR LEADED			
1	124	12545	0
2			
TODAY'S Tank Dip Totals (enter in Line G)		12545	
DIESEL			
1			
2			
TODAY'S Tank Dip Totals (enter in Line G)			

PRODUCTS PURCHASED THIS DATE

Invoice No 063281 -

Time of Delivery

Product	Quantity*
Premium Unleaded	12000
Regular Unleaded	13611
Regular Leaded	6000
Diesel	

(*Enter these numbers in Column "E")

B. Procedures for Monthly Petroleum Product Inventory Summary

In addition to the Daily Inventory Control Record, you must also complete a Monthly Petroleum Product Inventory Summary. This form is used for recording the overages and shortages to determine the cumulative overage or shortage for the month.

1. Transcribe the overages or shortages figures from the daily inventory control record.

2. Add or subtract the daily figures to yesterday's cumulative figure to determine today's cumulative loss or gain.
   Example:
   a. Yesterday there was a cumulative shortage of –280 litres.
   b. Today's daily inventory shows an overage of 43 litres.
   c. New cumulative figure, – 280 + 43 = shortage of 237 litres.

3. At the end of the month, total the number of days for which you had an overage and/or a shortage. Enter these figures at the bottom of the form.

   A completed example of this Monthly Inventory Summary can be found on the next page.

IMPORTANT

You could have a problem situation if you had:

— more than 18 shortages in a month
— a pattern of unexplained loss. Losses should be less than 0.5% of throughput per tank.

Check out possible reasons for the discrepancies in the reconciliation (e.g., theft of product, arithmetic errors, pump requiring calibration, delivery errors, or leaks) and if the figures are accurate, **report the situation immediately** to your marketing representative or area office.

This completes the procedures for reconciliation of tank measurements and book inventory. To assist in identifying leaking tanks and for tax reasons, the provincial government regulations require *completion and retention of these reconciliation records for a two year period*. N.A.T.A. recommends the retention of these records for two years at the site. Following this two year period, these records must be permanently stored in a safe location.

MONTHLY PETROLEUM PRODUCT INVENTORY SUMMARY

Month Year

	PREMIUM UNLEADED		REGULAR UNLEADED		REGULAR LEADED		DIESEL	
	DAILY (+ OR −)	CUMULATIVE (+ OR −)	DAILY (+ OR −)	CUMULATIVE (+ OR −)	DAILY (+ OR −)	CUMULATIVE (+ OR −)	DAILY (+ OR −)	CUMULATIVE (+ OR −)
1	+256	+256	−257	−257	−252	−252		
2	−241	+15	−85	−342	−257	−509		
3	+254	+269	+226	+116	+193	−316		
4	−257	+12	−205	−89	−63	−379		
5	+250	+262	−258	+169	+178	−201		
6	−56	+206	−257	−88	−72	−273		
7	+72	+278	+72	−16	−16	−289		
8	−143	+135	−56	−72	−88	−377		
9	+258	+393	+250	+178	+169	−208		
10	−226	+167	−241	−63	−72	−280		
11	−205	−38	+256	+193	−63	−343		
12	−85	−123	−257	−64	+193	−150		
13	+43	−80	+128	+64	+50	−100		
14	−200	−280	−143	−79	−72	−172		
15	+43	−237	−182	−261	−88	−260		
16	+256	+19	−257	−518	+169	−91		
17	−241	−222	−85	−603	+193	+102		
18	+254	+32	+226	−377	−72	+30		
19	−257	−225	−205	−582	−63	−33		
20	+250	+25	+258	−324	−16	−49		
21	−56	−31	+153	−171	+72	+23		
22	+72	+41	−257	−428	−16	+7		
23	−143	−102	+72	−356	−72	−65		
24	+258	+156	−56	−412	−88	−153		
25	−226	−70	+250	−162	−178	+25		
26	−205	−275	−241	−403	+63	−38		
27	−85	−360	+256	−147	−88	−126		
28	+256	−104	+128	−19	−112	−238		
29								
30								
31								
	13 (+)	No. of Days	13 (+)	No. of Days	9 (+)	No. of Days	(+)	No. of Days
	15 (−)	No. of Days	15 (−)	No. of Days	19 (−)	No. of Days	(−)	No. of Days

— Show the number of days in the month you have overages (+).
— Show the number of days in the month you have shortages (−).

Please Note: If the total number of minuses (−) (i.e., shortages) for any product exceeds eighteen (18) in any one month, this would indicate a possible problem. The problem could be theft, bookkeeping errors, inaccurate pump meters, tank truck delivery errors, or leaks in underground storage tanks and/or piping. CHECK IT OUT. If you suspect a leak, notify your supplier immediately for further advice. If you know you have a leak, immediately notify your sales representative and appropriate authorities.

BEST COPY AVAILABLE

V. COMMUNICATION REGARDING LARGE DISCREPANCIES IN PRODUCT RECONCILIATION

A. Contact your supplier marketing representative or supplier area office when:

1. A review of the summary reveals an unexplained pattern (first verify all readings and tank dips to ensure the accuracy of the reconciliation). Product losses should be less than 0.5% of throughput.
2. The total number of daily minus readings for any product exceeds 18 in any one month and a check of the reading does not immediately identify the problem.
3. Inspection of the surrounding land shows product surfacing or collecting in noticeable quantities.
4. Inspection of pumps and visible equipment indicate the presence of a leak.
5. There are indications of petroleum product vapours in sewers, basements, underground cable vaults in the vicinity of your underground tank(s).
6. You notice the pump is losing its prime or air is passing through the dispenser.
7. There is a noticeable accumulation of water in the tank(s) (over 3 centimetres).

B. Contact your supply point when:

1. Tank dips taken subsequent to an "unattended" delivery and prior to opening for business differ by more than 8.0 centimetres from those reported by the driver on the delivery form.
2. There is evidence of spilled product around the fill pipe.
3. The product delivery form was not left by the driver.

C. Emergency Phone Numbers:

To ensure prompt reporting it is necessary to keep an up-to-date list of the following numbers prominently displayed near your phone:

- Service station manager
- Sales representative and alternate
- Supply point
- Reliable contractors
- Fire department
- Police
- Appropriate government authorities

D. Spill Response:

Safety has to be of prime concern. Only take action to clean up if it can be done safely:

1. Secure area.
2. Stop source if possible.
3. Prevent spillage from entering sewers, ditches, etc.
4. On small spills, use sorbent to clean up. On larger spills, call for HELP.

Note: Sorbent material must be stored on-site for emergency use.

Acknowledgement

The National Automotive Trades Association of Canada gratefully acknowledges the co-operation of the following:

- Environment Canada
- The Retail Gasoline Dealers Association of Nova Scotia
- Ultramar Canada Inc.

388

TEACHER SUPPORT MATERIAL

WAREHOUSE SERVICES 26

COURSE SEQUENCE

Warehouse Services 26 is the intermediate course in the Warehouse Services 16-26-36 sequence. This sequence is one of three occupational courses that comprise the transportation occupational cluster.

Warehouse Services 26 orients students to explore the warehousing and parts sales industry.. Students who indicate a strong desire or interest in pursuing jobs in the industry should be encouraged to explore the related courses of business services, automotive services and service station services.

Students demonstrating appropriate interests, attitudes, levels of participation and basic competencies should be encouraged to complete the warehouse services sequence and consider complementing it with one or more related course sequences.

ENTRANCE REQUIREMENT

Students taking Warehouse Services 26 must have completed satisfactorily Warehouse Services 16 or an equivalent course.

INSTRUCTIONAL LOCATIONS AND FACILITIES

Schools already teaching an Automotive Parts Merchandising 15 program may wish to integrate teaching Warehouse Services 26 with the merchandising course. Where a lab is not available and/or where integration of students is not possible, two alternatives are suggested:

1. Use the school's receiving and stock control area, bookstore, cafeteria or automotives area.
2. Establish and use community partners to provide students with on-the-job instruction, under a teacher's supervision, for the majority of the Warehouse Services 26 course.

An automotives parts lab located adjacent to the automotives shop may be a suitable situation, as it provides a stockroom environment sufficiently authentic to instil a sense of responsibility in the students.

Basic equipment suggested for an in-school parts/warehousing operation include:

Basic hand and power tools
Bin section, 12 compartments
Catalogues related to available stock
Fill material (newspaper, polystrene chips)
Packaging tape
Razor knife
Selection of cardboard boxes
Selection of forms used in local warehouses
Selection of used parts
Shelving section
Tub file with stock inventory cards

OTHER LEARNING RESOURCES

Ackerman, Kenneth B. *Practical Handbook of Warehousing.* (2nd edition.) The Traffic Service Corporation, Washington, 1986.

Briggs, Andrew J. *Warehouse Operations, Planning and Management.* (2nd edition.) John Wiley and Sons, New York, 1960.

Eastman, Robert M. *Materials Handling.* Marcel Dekker Inc., New York, 1987.

Hilgenberg, Gene and Jane Huston. *Employment in Agribusiness.* Mid-American Vocational Curriculum Consortium, Stillwater, Oklahoma, 1984.

Kulwiec, Raymond A. (ed.) *Materials Handling Handbook.* (2nd edition.) John Wiley and Sons, New York, 1985.

Other sources of resources include:

Alberta Workers' Health, Safety and Compensation
Contact: Occupational Hygiene Branch Offices:
9321 - 48 Street
Edmonton, Alberta
T6B 2R4
(403) 427-4792

2nd Floor, 1021 - 10 Avenue, S.W.
Calgary, Alberta
T2R 2B7
(403) 261-2188

Health and Welfare Canada
Contact: Health Protection Branch
Health and Welfare Canada
930 Carling Street
Ottawa, Ontario
K1A 1B4

Warehousing and Supply House Catalogues

COPYRIGHT ACKNOWLEDGEMENTS

Alberta Education wishes to thank the following authors, publishers and agents for granting permission to include copyrighted materials.

Alberta Agriculture for the excerpts from *The Communication Tool Kit*.

Alberta Career Development and Employment for the excerpts from *The Easy-to-Read Career Planning Guide*, 1986.

Alberta Career Development and Employment for the excerpts from *The Job Seekers' Handbook*.

Alberta Education for the excerpts from *Entrepreneurship in the Alberta Curriculum: A Monograph*, 1988.

Alberta Education for the excerpts from *Job Search Information Guide*, 1986.

Alberta Human Rights Commission for the excerpts from *Protecting Human Rights*, 1986.

Alberta Labour for *Rights and Obligations of Employees and Employers*, 1988.

Alberta Occupational Health and Safety for *WHMIS* Information materials, 1989.

Calgary Catholic Schools for the excerpts from *Sample Lessons in Creative Thinking*, 1986.

Employment and Immigration Canada for permission to use form EMP 2120 - Application for a Social Insurance Number.

Environment Canada for permission to use *Fact Sheet: Leaking Underground Storage Tanks*.

Gasoline dealers Association of Nova Scotia for permission to use *Gasoline and Diesel Oil Meter and Dip Book*, 1987.

Mulcahy, Marfo, Peat and Andrews for the excerpts from *A Strategies Program for Effective Learning/Thinking*, 1987 by permission of the authors.

The National Automobile Trades Association of Canada for permission to use *Management of Underground Petroleum Storage Inventory*.